

# CHAPTER I

## EXECUTIVE SUMMARY

### FORECAST HIGHLIGHTS

The demand for seats on commercial airplanes, which dipped severely in the wake of 9/11, will make a complete return by the end of this year.

Without question, regional and low-cost carriers<sup>1</sup> are lifting a surprisingly heavy load. Their combined enplanements are up 40 percent since 2000. This gives them a 43 percent share of the market, up from a 30 percent share in 2000. Increased competition is causing legacy carriers<sup>2</sup> to continue to cut costs and prices in markets served by low-cost carriers. This is good news for the flying public, but a bitter pill for an industry navigating through tough business times. While total domestic enplanements are down 2 percent since 2000, legacy carrier enplanements are down more than 20 percent. In 2000, legacy carriers controlled 70 percent of the market; today that number is 57 percent.

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<sup>1</sup> American Trans Air, America West Airlines, AirTran, Frontier Airlines, JetBlue Airways, Southwest Airlines, and Spirit Air Lines.

<sup>2</sup> Alaska Airlines, American Airlines, Continental Airlines, Delta Air Lines, Northwest Airlines, United Airlines, and US Airways.

As competition increases, the newer entrants are outpacing the legacy carriers that dominated the market for decades. In 2004, legacy carriers reported a \$6 billion net loss. Conversely, low-cost and regional carriers combined to earn a net profit of \$740 million, and cargo carriers reported net profits of \$832 million. Higher fuel prices cost the industry some \$3.4 billion last year alone.

For the FAA, the overall shift from large jets to smaller aircraft increases our workload. Regional jets carry fewer passengers per flight and represent 37 percent of the commercial traffic at the nation's 35 busiest airports. That's up from 30 percent in 2000. Lower ticket prices have resulted in less tax revenues flowing into the Aviation Trust Fund, which pays for most of the FAA's costs to operate the system. Because of the downtrend in flying post-9/11, the trust fund now holds \$2.4 billion. In 2000, the balance was \$4.3 billion.

Nevertheless, the FAA continues to be cautiously optimistic about the future. The last 5 years have resulted in a virtual holding pattern, with 9/11, the spread of the Severe Acute Respiratory Syndrome (SARS), and record high fuel prices dampening the demand for aviation services. An important yardstick, though, remains the number of passengers traveled. Last year, that number was 688 million, up from 642 million the previous

year. Commercial aviation remains on track to exceed one billion passengers by 2015. In addition, international traffic is growing almost 2 percent faster than domestic traffic. The remaining formidable hurdle for the commercial aviation industry as a whole will be the price of oil.

In the long run, inexpensive tickets, a strong national economy, and increasing demand for seats aboard aircraft should bode well for the industry and consumers.

## REVIEW OF 2004

Since 2000, U.S. aviation has been jolted by a number of unanticipated events that have significantly impacted the demand for air travel. These include the September 11<sup>th</sup> terrorist attacks, conflict in the Middle East, the SARS epidemic, and a rapid run-up in world oil prices. The impact of these events on airlines, travel markets, and economic growth were immediate and significant.

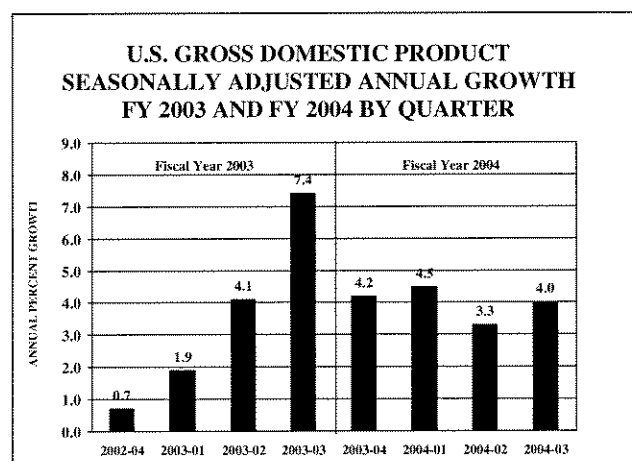
Although the effect from these events has also been global in scope, the greatest impact by far has been on U.S. legacy airlines. Five U.S. mainline carriers are currently operating under Chapter 11 bankruptcy protection<sup>3</sup> and several others appear to be on the brink. Although demand recovered strongly in 2004, profits remained elusive for a fourth consecutive year. Following a 3-year run of declining shipments and weak billings, the market for general aviation products and services also staged a relatively strong recovery in 2004. General aviation aircraft shipments and billing were stimulated by growth in U.S. economic activity as well as by accelerated depreciation allowances for the operators of new aircraft.

<sup>3</sup> Aloha Airlines, American Trans Air, Hawaiian, United Airlines, and US Airways.

Calendar and fiscal year results and growth rates have exhibited marked differences since September 11<sup>th</sup>, not only during the 2001 to 2003 time period, but also continuing through 2004. Where appropriate, statistics and growth rates are noted on both a fiscal and calendar year basis.<sup>4</sup> In addition, summary Table I-10 provides calendar year traffic statistics and growth rates for selected aviation supply and demand measures.<sup>5</sup>

## U.S. ECONOMIC ACTIVITY

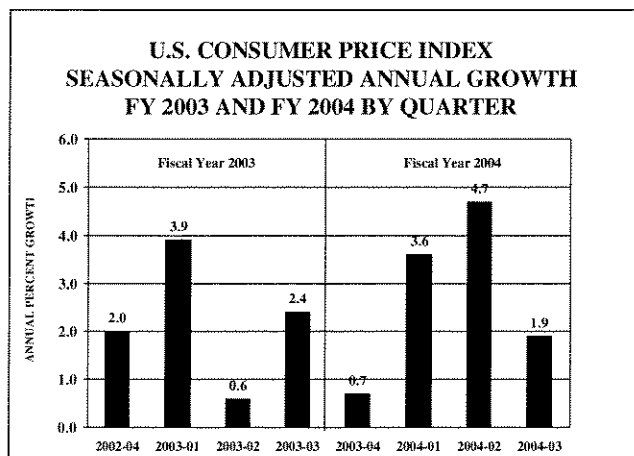
The U.S. economic recovery is well underway, with U.S. Gross Domestic Product (GDP) growing by 2.5 and 4.6 percent, respectively, in fiscal years 2003 and 2004. Seasonally adjusted quarterly growth has ranged from a low of 0.7 percent in first quarter fiscal 2003 to a high of 7.4 percent in fourth quarter fiscal 2003, the latter period reflecting the impact from the mid-year tax cut. The broad expansion in U.S. economic activity witnessed during the latter half of 2003 and most of 2004 is expected to continue into 2005 and 2006.



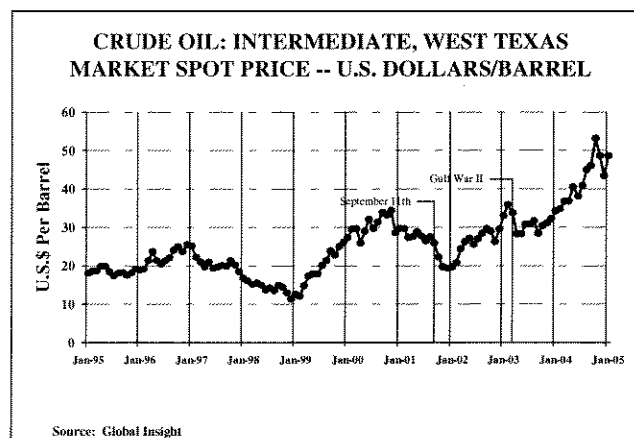
<sup>4</sup> All stated years and quarters for U.S. economic and U.S. air carrier traffic and financial data and forecasts are on a fiscal year (FY) basis (October 1 through September 30). All stated years and quarters for international economic and world traffic and financial data and forecasts are on a calendar year (CY) basis, unless otherwise denoted.

<sup>5</sup> See page I-41.

U.S. inflation (as measured by the consumer price index [CPI]) averaged 2.4 and 2.3 percent, respectively, in fiscal years 2003 and 2004. Although these annual price increases are no higher than the average over the last 10 years (2.4 percent), inflation edged considerably higher during the middle two quarters of fiscal 2004 (up 3.6 and 4.7 percent, respectively, on a seasonably adjusted basis), due, in large part, to the spike in oil prices.

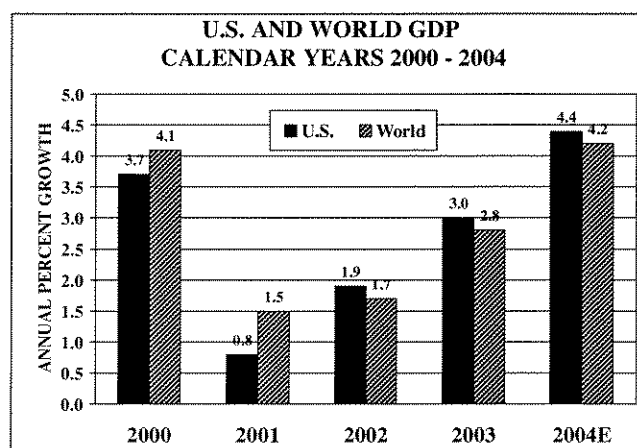


Fuel prices, as measured by the Oil and Gas Price Index, were up 18.5 percent in fiscal 2003 and 13.0 percent in fiscal 2004. However, much of the increase occurred during the latter half of 2004, with the spot price for intermediate west Texas crude oil peaking above \$55/barrel in October. These high prices are the result of a number of factors, including strong worldwide economic demand and concerns regarding the potential disruption of oil supplies. Oil prices fell to \$43/barrel in late December, prompting the Organization of the Petroleum Exporting Countries (OPEC) to cut oil production by 4.0 percent and to schedule another meeting for January 30 to consider further production cuts. In the interim, crude oil prices rose above \$49/barrel in late January.



## WORLD ECONOMIC ACTIVITY

Globally, economic gains have generally mirrored those of the U.S., growing by 4.2 percent in 2004 and averaging 2.5 percent annually over the past 4 years. The similarity in growth reflects the increasing convergence of global trade markets as well as the growing dependency of many world economies on export trade with the United States.



On a calendar year basis, economic growth in Canada is expected to be significantly less than that of the United States in 2004—up 3.0 percent compared to 4.4 percent. The combined economies of the Asian/Far East nations are expected to grow at an annual rate of 5.2 percent in 2004, due in large part to strong economic activity in China (up 9.1 percent) and the continuing economic recovery in Japan (up

4.1 percent). The combined economies of the Europe/ Middle East/Africa nations are expected to grow by 3.0 percent in 2004, as relatively strong economic activity in Eastern European countries (up 7.1 percent) partially offsets sluggish growth in Eurozone<sup>6</sup> countries (up 1.9 percent). The combined economies of Latin America and Mexico are forecast to grow by 5.3 percent in 2004, the higher growth in this region due to the strong economic recoveries underway in Venezuela (up 16.4 percent) and Uruguay (up 11.0 percent).

## COMMERCIAL AVIATION

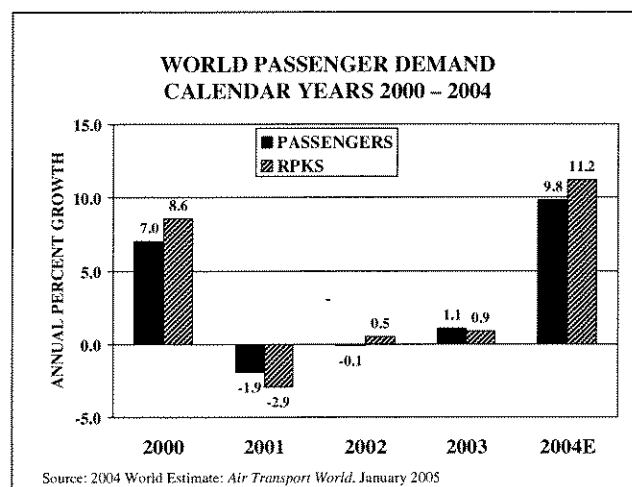
Although both U.S. and world airlines were heavily impacted by the run-up in jet fuel prices in 2004, the demand for aviation services was only minimally affected as increased competition from low-cost carriers (both U.S. and globally) precluded most carriers from passing the increased fuel costs on to the traveling public. The impact to U.S. and world airlines was to the bottom line—namely profits or the lack thereof.

### World Travel Demand

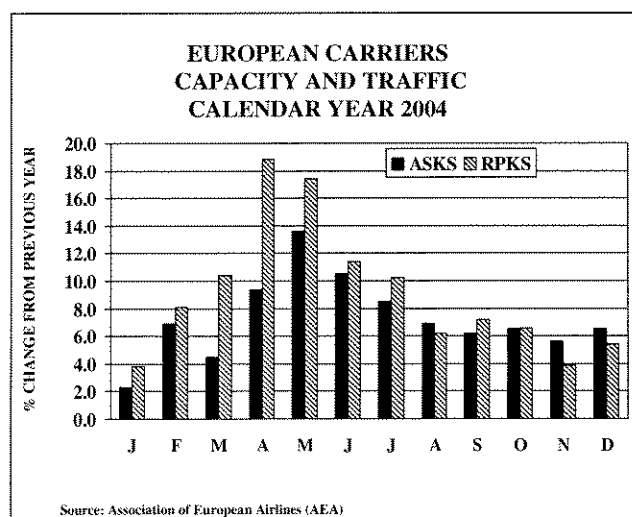
Based on data compiled by the International Civil Aviation Organization (ICAO), world air carriers transported 1.6 billion passengers (up 1.1 percent) for a total of almost 3 trillion revenue passenger kilometers (RPKs) (up 0.9 percent) in calendar year 2003. Although worldwide traffic results are not available for full year 2004, early indications are that the demand for world aviation services more than made up for the slowdown attributed to SARS and the Gulf War in 2003. *Air Transport World* estimates that the number of passengers transported worldwide will increase by

<sup>6</sup> Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain.

9.8 percent and that worldwide RPKs will increase by 11.2 percent in 2004,<sup>7</sup> effectively surpassing pre-September 11<sup>th</sup> levels of demand for both passengers and RPKs.<sup>8</sup>



Statistics from the Association of European Airlines (AEA) indicate that passengers and RPKs increased 4.8 percent and 9.0 percent, respectively, during calendar year 2004. Capacity, as measured by available seat kilometers (ASKs), was up 7.3 percent.



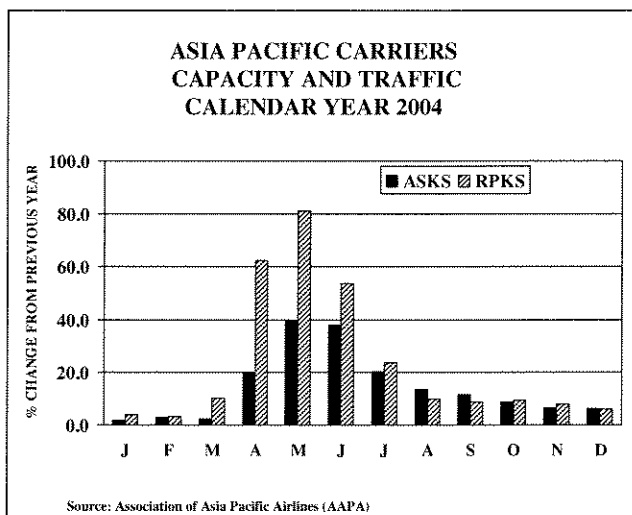
The relatively strong growth by AEA members in 2004 largely reflects the strong recovery from the effects of the war in Iraq and SARS. During

<sup>7</sup> *Air Transport World*, January 2005.

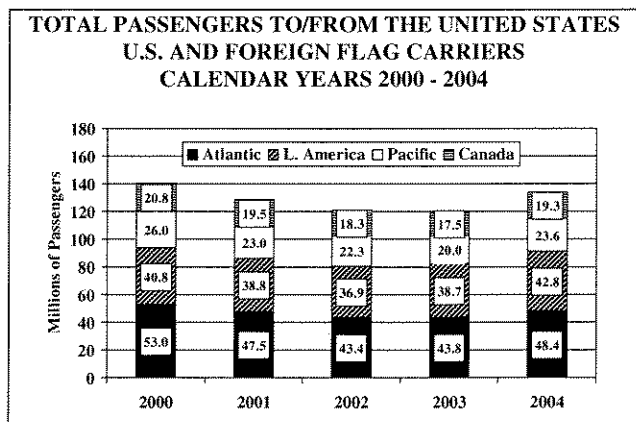
<sup>8</sup> All references of comparison to the pre-September 11<sup>th</sup> period use fiscal or calendar year 2000 as the base year.

the March to May 2004 time period, passengers were up 9.3 percent, RPKs up 15.5 percent, and ASKs up 9.1 percent.

The Association of Asian Pacific Airlines (AAPA) reported increases of 18.6 percent in RPKs and 13.1 percent in ASKs for calendar year 2004. For the 3-month period April to June, the height of the SARS epidemic in 2003, traffic and capacity were up 64.7 and 31.9 percent, respectively.



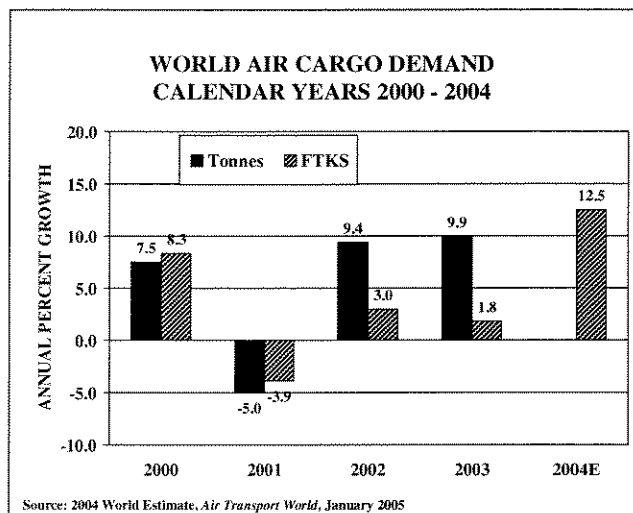
In calendar year 2004, it is estimated that U.S. and foreign flag carriers combined will transport a total of 134.0 million passengers between the United States and the rest of the world, an increase of 11.7 percent over 2003.



Passenger traffic is projected to increase in all four world travel regions in 2004--Atlantic markets, 48.4 million (up 10.4 percent); Latin

American markets, 42.8 million (up 10.5 percent); Asia/ Pacific markets, 23.5 million (up 17.7 percent); and Canadian transborder markets, 19.3 million (up 10.5 percent). Latin America is the only international travel market projected to return to pre-September 11<sup>th</sup> levels by the end of 2004.

Worldwide freight tonnes and freight tonne kilometers (FTKs) declined 5.0 and 3.9 percent, respectively, in 2001. Since then, however, worldwide air cargo demand has responded positively to stronger global economic activity, with freight tonnes and FTKs up 20.2 and 5.1 percent, respectively, over the past 2 years. *Air Transport World* estimates that worldwide FTKs will increase by 12.5 percent in 2004.<sup>9</sup>

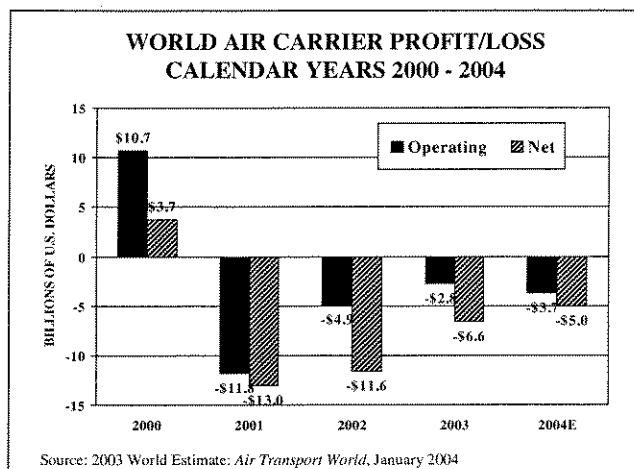


AEA statistics indicate that its member carriers' FTKs were up 9.9 percent in calendar year 2004. AAPA statistics show an increase of 13.8 percent over the same time period.

Based on financial data compiled by ICAO, world air carriers (including U.S. airlines) reported operating and net losses of \$2.8 and \$6.5 billion, respectively, in 2003. Since 2000, world airlines have incurred cumulative operating losses of \$28.0 billion and net losses of \$30.8 billion. Air carrier financial results in 2004 were heavily impacted by significantly higher fuel prices during much of the year. In

<sup>9</sup> *Air Transport World*, January 2005.

early December, the International Air Transport Association (IATA) estimated that global airline industry losses could top \$4.0 billion in 2004.<sup>10</sup> Preliminary estimates by *Air Transport World* indicate that world airline operating and net losses could total \$3.7 and \$5.0 billion, respectively, in 2004.<sup>11</sup>

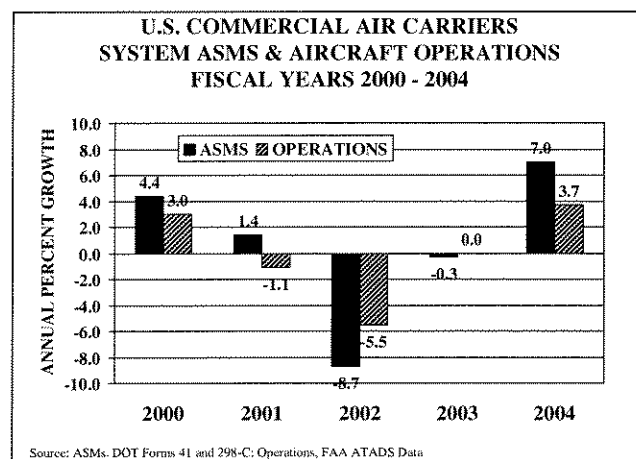


## U.S. Travel Demand

The U.S. commercial aviation industry consists of 43 mainline air carriers that operate large passenger jets (over 70 seats) and 79 regionals/commuters that operate smaller piston, turboprop, and regional jet aircraft (up to 90 seats) to provide feed to the larger carriers. Mainline and regional carriers generally provide both domestic and international passenger service between the U.S. and foreign destinations, although regional carrier international service is generally confined to border markets in Canada, Mexico, and the Caribbean. An additional 24 mainline all-cargo carriers provide domestic and/or international air cargo service.

U.S. commercial air carrier system capacity (domestic plus international), as measured by available seat miles (ASMs), grew by

7.0 percent in 2004, while commercial aircraft flights at FAA and contract towers posted a gain of 3.7 percent. Although commercial carrier ASMs exceeded pre-September 11<sup>th</sup> levels in 2004, commercial activity at FAA facilities remains 2.9 percent below the levels recorded in 2000. The higher growth exhibited by ASMs relative to flights reflects the large increases in average trip length (up 46.4 miles) since 2000.

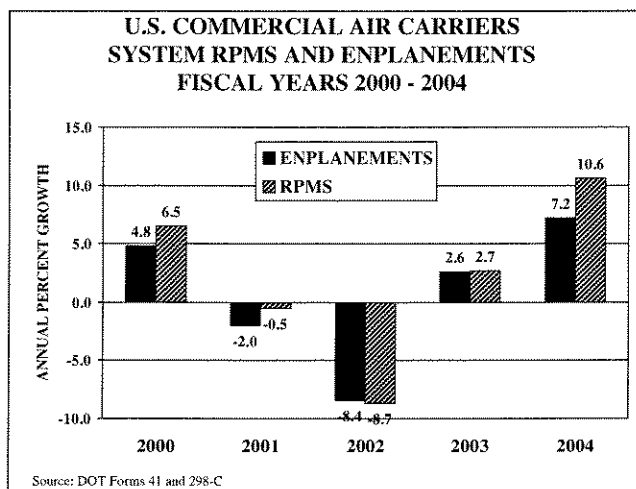


U.S. commercial air carrier system revenue passenger miles (RPMs) and passenger enplanements grew by 10.6 and 7.2 percent, respectively, in 2004. At the end of 2004, commercial air carrier RPMs exceeded pre-September 11<sup>th</sup> levels by 3.3 percent while passenger enplanements remain 1.3 percent below levels recorded in 2000. The higher growth exhibited by RPMs relative to enplanements reflects the large increases recorded in load factor (up 3.3 points) and passenger trip length since 2000.

U.S. commercial air carriers achieved an all-time high load factor of 75.2 percent in 2004, up 2.4 points over the previous high recorded in 2003.

<sup>10</sup> *Aviation Daily*, December 3, 2004

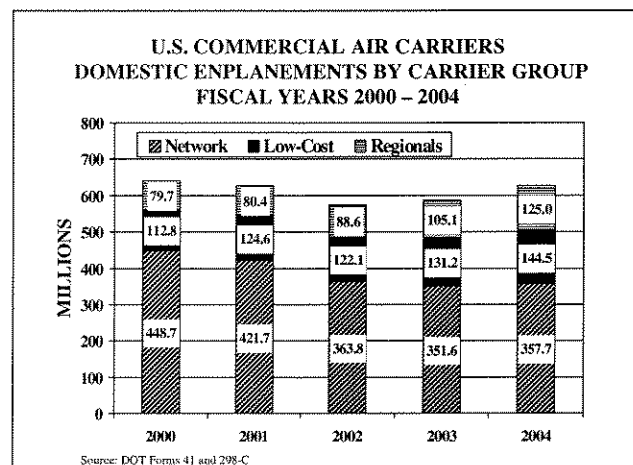
<sup>11</sup> *Air Transport World*, January 2005



In calendar year 2004, it is estimated that commercial air carrier system capacity and traffic will increase as follows: ASMs up 8.4 percent; RPMs up 11.4 percent; and enplanements up 8.1 percent.

Three distinct trends have emerged since the events of September 11<sup>th</sup> that have helped shape today's U.S. commercial air carrier industry: (1) major restructuring and downsizing among the mainline legacy carriers; (2) rapid growth among low-cost carriers, particularly in nontraditional long-distance transcon markets; and (3) phenomenal growth among regional/commuter carriers. These trends will be discussed more fully in subsequent chapters of the forecast document.

The combined domestic enplanements of the low-cost carriers and regionals/commuters have increased 40.0 percent since 2000, totaling 269.5 million in 2004. In 2004, their combined passenger count represented 43.0 percent of system commercial enplanements, up from 30.0 percent in 2000.



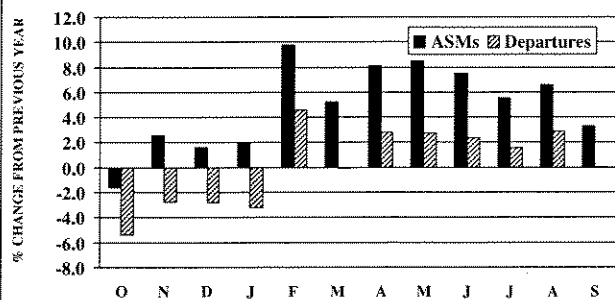
## Mainline Air Carriers--Passengers

U.S. mainline carriers' system capacity and traffic (the sum of domestic and international services) posted relatively large increases in 2004. System ASMs were up 5.6 percent while system RPMs and enplanements showed gains of 9.2 and 4.9 percent, respectively. The system-wide load factor increased 2.5 points to 75.9 percent in 2004, an all-time high.

## Mainline Domestic Passenger Markets

Domestic capacity (50 states, Puerto Rico, and the U.S. Virgin Islands) was up 4.9 percent in 2004 while the number of departures flown was up only 0.2 percent. Some of the growth in capacity reflects the schedule reductions implemented in April 2003 in response to reduced passenger demand resulting from the war in Iraq. Domestic ASMs were up 3.1 percent during the first half of fiscal 2004, but up 6.6 percent over the latter half of the year. Domestic departures declined 1.8 percent during the first half of the year but were up 2.1 percent over the last 6 months of 2004. At the end of 2004, domestic ASMs remain 5.0 percent below pre-September 11<sup>th</sup> levels, departures 15.4 percent below.

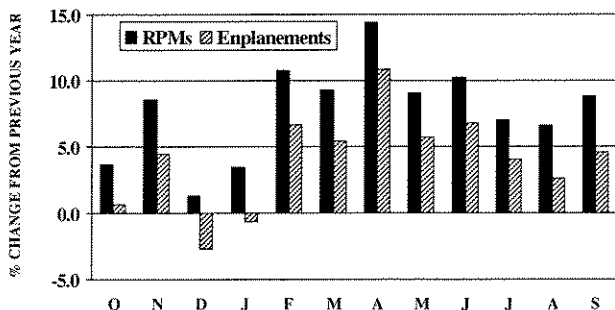
### U.S. MAINLINE AIR CARRIERS DOMESTIC CAPACITY FISCAL YEAR 2004



Source: DOT Form 41 Data

For the most part, domestic traffic demand was relatively strong throughout the year, with the mainline carriers posting gains of 7.7 and 4.0 percent in RPMs and enplanements, respectively, in 2004. As with capacity, part of the increase in 2004 reflects weak passenger demand in 2003 as a result of the start of the war with Iraq. Despite the gains achieved in 2004, domestic enplanements remain 10.6 percent below pre-September 11<sup>th</sup> levels, domestic RPMs only 0.3 percent below.

### U.S. MAINLINE AIR CARRIERS DOMESTIC TRAFFIC FISCAL YEAR 2004



Source: DOT Form 41 Data

Mainline carriers achieved an all-time high domestic load factor of 74.7 percent in fiscal 2004, an increase of 2.0 points over the previous year.

In calendar year 2004, it is estimated that mainline carrier domestic capacity and traffic

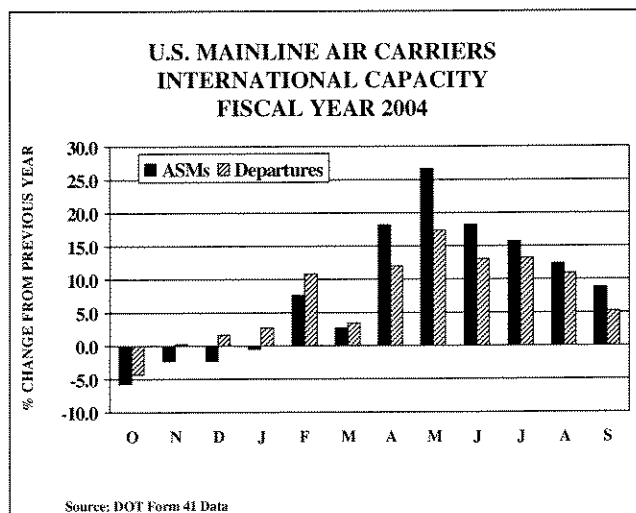
will increase as follows: ASMs up 5.6 percent; RPMs up 8.3 percent; and enplanements up 4.9 percent.

Since 2000, mainline network carriers have reduced their domestic capacity by 14.3 percent while low-cost carriers have reported capacity increases of 40.5 percent. Owing to the large reductions in capacity, network carrier RPMs and enplanements fell 9.8 and 20.3 percent, respectively. During this same time period, low-cost carrier RPMs and enplanements have increased 46.8 and 28.0 percent, respectively. The bottom line result is that the network carriers' share of domestic mainline capacity has fallen from 82.9 percent in 2000 to 74.7 percent in 2004 while their share of RPMs has fallen from 83.2 to 75.3 percent.

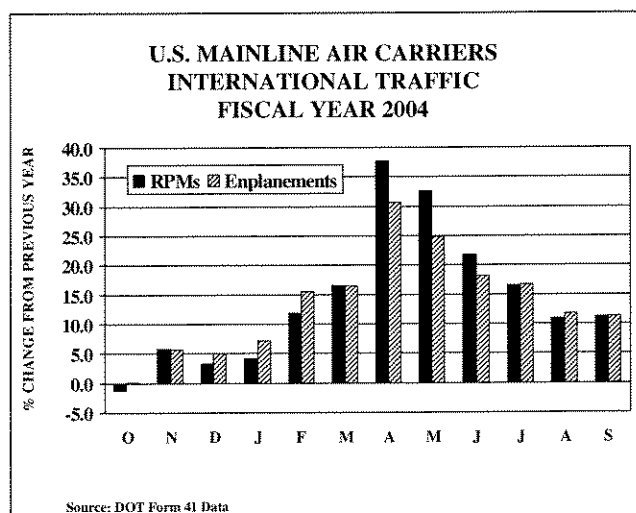
### Mainline International Passenger Markets

Mainline carriers posted strong gains in international capacity and traffic in 2004, the strong showing during the April to June period reflecting the negative impacts of SARS and the start of the Gulf War in 2003. U.S. carriers' ASMs and departures were up 7.9 and 7.1 percent, respectively, in 2004. ASMs and departures increased in all world travel regions—up 12.1 and 7.9 percent, respectively, in Latin American markets; up 7.3 and 6.4 percent, respectively, in Atlantic markets; and up 5.4 and 5.7 percent, respectively, in Asia/Pacific markets.





International RPMs and passenger enplanements were up 13.7 and 13.4 percent, respectively, in 2004. Asia/Pacific markets posted the strongest gains, with RPMs up 15.8 percent and enplanements up 17.3 percent. RPMs and enplanements grew by 13.7 and 12.9 percent, respectively, in Latin American markets and by 12.3 and 11.7 percent, respectively, in Atlantic markets.



International load factor reached an all-time high of 79.5 percent in 2004, up 4.0 percentage points over the previous year. All three world travel regions recorded record high load factors in 2004: 84.2 percent in Asia/Pacific markets; 81.7 percent in Atlantic markets; and 70.3 percent in Latin American markets.

Despite the relatively strong growth recorded during 2004, U.S. international ASMs and RPMs remain 7.0 and 2.8 percent, respectively, below levels recorded in 2000. However, both departures and enplanements exceeded 2000 levels in 2004. This disparity reflects the stronger growth exhibited in the shorter trip distance Latin American markets for both capacity and traffic since 2000. With the exception of Asia/Pacific passenger enplanements (9.6 percent above 2000 levels<sup>12</sup>), all other capacity and traffic measures for the Atlantic and Pacific markets remain below levels achieved in 2000.

In calendar year 2004, it is estimated that international capacity and traffic will increase as follows: ASMs up 11.8 percent; RPMs up 15.7 percent; and enplanements up 14.9 percent.

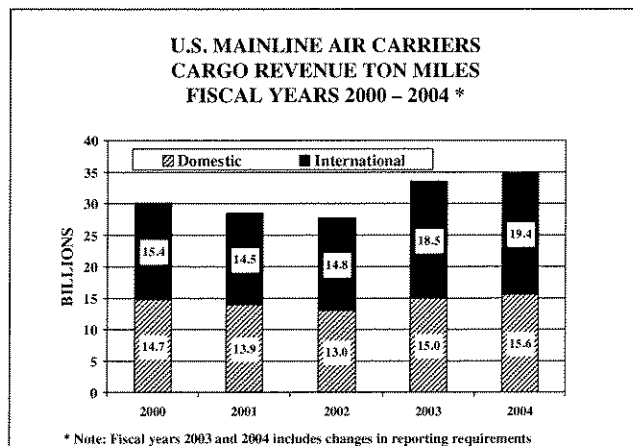
## Mainline Air Carriers--Cargo

Since September 11<sup>th</sup>, both the FAA and the Transportation Security Administration (TSA) have issued a number of security directives aimed at strengthening security standards for transporting cargo on both passenger and all-cargo flights. These directives have had the effect of diverting some portion of the freight and mail cargo from passenger to all-cargo carriers. In November 2004 TSA issued a notice of proposed rulemaking that applies security requirements throughout the supply chain.

The recovery in U.S. cargo activity occurred somewhat earlier and has been stronger than that of passenger traffic, reflecting, in part, the strong growth in both U.S. and world economic activity. U.S. air carrier cargo revenue ton miles (RTMs) increased 4.8 percent in 2004,

<sup>12</sup> ATA's *Monthly Passenger Traffic Reports* show that Pacific enplanements were 6.2 percent below 2000 peak enplanements at the end of fiscal year 2004.

3.8 percent in domestic markets and 5.5 percent in international markets.



In 2004, all-cargo carriers transported 75.9 percent of domestic RTMs and 59.7 percent of international RTMs, up from 70.0 and 49.3 percent, respectively, in 2000.

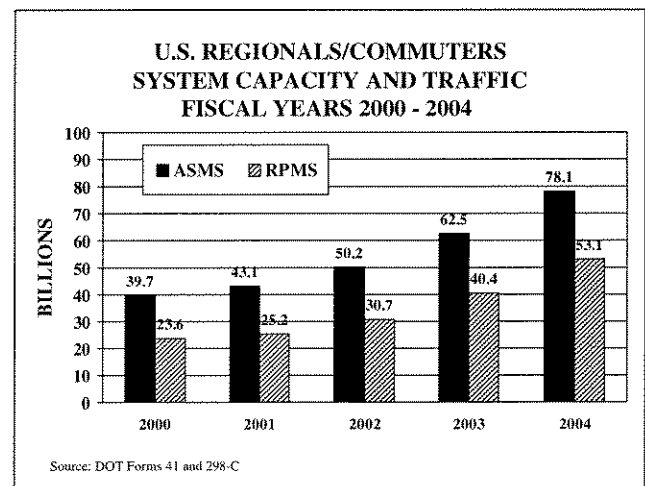
## Regionals/Commuters

Regionals/commuters continued to benefit from their larger code-share partner's restructuring and downsizing during 2004. Regional/commuter ASMs were up 25.0 percent in 2004 (up 96.9 percent since 2000), 25.1 percent in domestic markets and 20.9 percent in international markets. However, regional/commuter departures have grown at a somewhat slower pace, up 7.0 percent in 2004 and up only 13.6 percent since 2000.

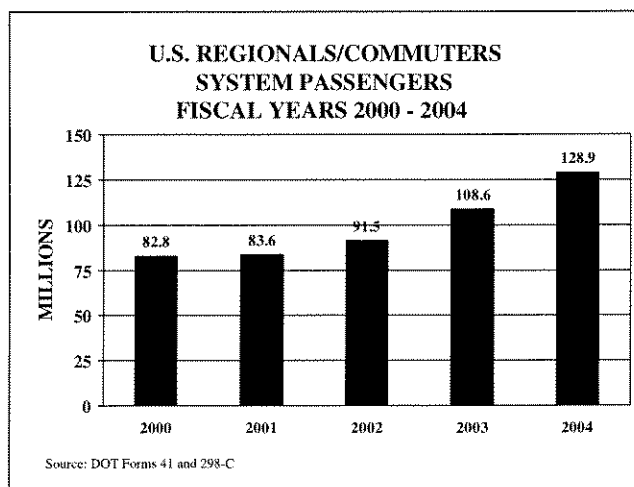
The higher growth in ASMs relative to departures is due, in large part, to the large increases recorded in the average stage and passenger trip lengths since 2000—up 102.0 and 126.1 miles, respectively. The longer stage and trip length increases reflect the fact that most of the routes transferred from the larger partners were in medium-haul, non-traditional regional markets that could be flown more efficiently by smaller regional jets. The slower growth in departures since 2000 also reflects the fact that many of the shorter trip distance piston and

turboprop flights have either been replaced by larger regional jets or discontinued altogether.

Regional/commuter passenger traffic also continued to grow strongly in 2004. System RPMs were up 31.2 percent (up 124.5 percent since 2000), 31.2 percent in domestic markets and 33.8 percent in international markets. In addition, regionals/commuters achieved an all-time high load factor of 67.9 percent in 2004, up 3.2 percentage points over the previous year.



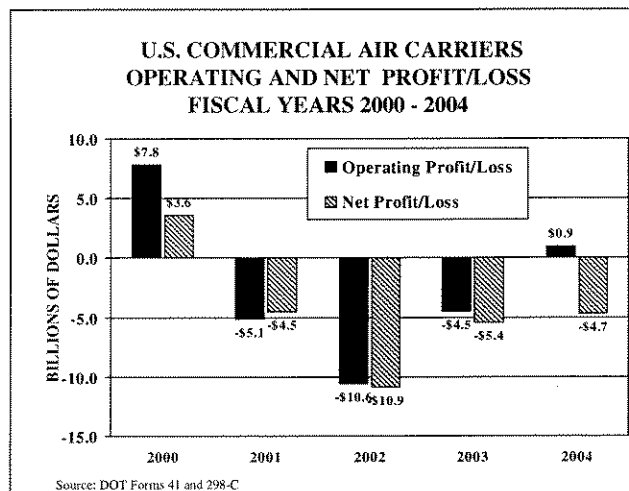
Regionals/commuters enplaned a total of 128.9 million passengers in 2004, up 18.7 percent over 2003 and up 55.7 percent over 2000. Domestic passengers totaled 125.0 million (up 19.0 percent) while international passengers totaled 3.9 million (up 11.0 percent). The large disparity in passenger growth relative to passenger miles is due to the large increases in stage and passenger trip length.



In calendar year 2004, it is estimated that system regional/commuter capacity and traffic will increase as follows: ASMs up 24.5 percent; RPMs up 29.6 percent; and enplanements up 18.9 percent.

## U.S. Commercial Air Carriers 2004 Financial Results

Financial results for the U.S. commercial airline industry (including regionals/commuters) were largely mixed in 2004, reflecting large disparities between passenger and cargo carriers, between domestic and international markets, as well as among the various passenger carrier groupings. In fiscal year 2004, U.S. commercial airlines reported an operating profit of \$939.2 million and a net loss of \$4.7 billion. Since 2000, the industry has posted cumulative operating and net losses of almost \$20.0 and \$26.0 billion, respectively.



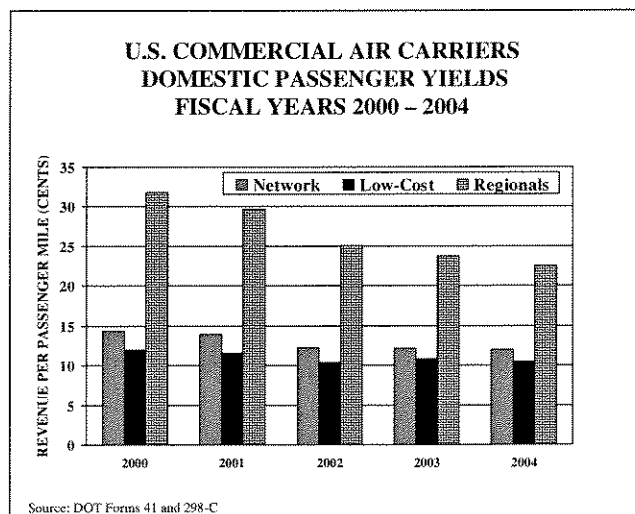
Operating revenues (passenger and cargo) were up 10.2 percent in 2004, reflecting relatively strong passenger and cargo demand. Operating expenses were up only 5.3 percent in 2004, reflecting the tremendous strides made by most mainline carriers in reducing operating costs. Unfortunately, a 22.5 percent spike in jet fuel prices (from \$0.833 to \$1.021) negated most of these gains. The higher jet fuel costs are estimated to have cost the industry an additional \$3.4 billion in operating costs in 2004, effectively wiping out what could have been a reasonably strong year financially.

In 2004, air cargo carriers reported operating and net profits of \$1.6 billion and \$832.4 million, respectively. FedEx dominated the cargo industry in terms of profits in 2004, accounting for 76.3 and 84.7 percent, respectively, of the group's operating and net profits. However, most of the carriers in this group posted positive results in 2004. On the other hand, passenger carriers reported operating and net losses of \$691.4 and \$5.5 billion, respectively, in 2004.

International operations were largely profitable for both air cargo and passenger carriers in 2004. Air cargo carriers reported operating and net profits of \$980.6 and \$540.5 million, respectively, in 2004. Passenger airlines earned \$1.3 billion in operating profit and \$238.3 million in net profit. While domestic markets were generally profitable for cargo carriers (operating and net profits of \$799 and \$371 million) they

were an absolute disaster for passenger carriers who incurred an operating loss of \$2.3 billion and a net loss of \$5.9 billion in 2004.

The seven low-cost carriers reported combined operating and net profits of \$642.4 million and \$191.5 million, respectively, in 2004. However, these carriers' financial results represent a deterioration from 2003 results and recent trends provide some cause for concern. Three of the 7 carriers posted operating losses, 4 carriers reported net losses, and American Trans Air is currently operating under Chapter 11 bankruptcy protection. In addition, intense competition against the legacy carriers, especially in the transcon markets, has been costly to the carriers in terms of passenger yield. Low-cost carriers' passenger yield declined 2.1 percent in 2004 (compared to a 1.1 percent decline for the network carriers) and is down 12.7 percent since 2000.



Regional/commuter carriers were also largely profitable in 2004, reporting operating profits of \$1.0 billion and net profits of \$432.8 million. Although profitable, these carriers' future is closely tied to the fortunes of the larger legacy carriers for whom they provide feed at major air carrier airports. U.S. mainline carrier regional affiliates' passenger yield declined 5.4 percent in 2004 and is down 24.2 percent since 2000. Much of the decline in 2004 reflects the lower

fee-per-departure contracts negotiated with their larger partners.

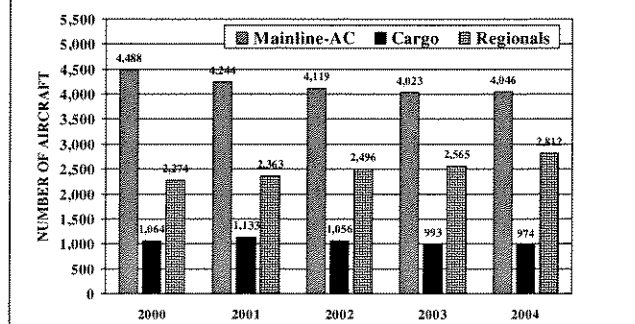
Most of the industry's financial loss is from the seven legacy carriers' domestic operations. Since 2000, these seven carriers have reported combined operating and net losses of \$22.9 and \$23.4 billion, respectively, on their domestic operations. In 2004 alone, the seven carriers domestic operations incurred operating and net losses of \$3.8 and \$6.2 billion, respectively. Three carriers—Delta, United, and US Airways—accounted for almost 64 percent of the operating loss and 78 percent of the net loss. Two of the carriers are operating under Chapter 11 bankruptcy protection and several others are on the brink. These seven carriers accounted for 64.9 percent of domestic capacity and transported 55.0 percent of all domestic passengers in 2004.

## U.S. Commercial Air Carriers 2004 Aircraft Fleets

In the immediate aftermath of September 11th, many of the mainline airlines grounded large numbers of their older, less efficient aircraft and deferred delivery of many of the new aircraft scheduled for delivery over the next several years. The industry's current weakened financial condition has dictated yet another round of restructuring and cost reduction efforts, the end result being the grounding of additional aircraft and/or the deferring of additional aircraft deliveries.

The number of aircraft in the U.S. commercial fleet (including regionals/commuters) is estimated to total 7,832 in 2004, an increase of 251 aircraft from 2003. This includes 4,046 mainline air carrier passenger aircraft (over 70 seats), 974 mainline air carrier cargo aircraft, and 2,812 regional/commuter aircraft (jets, turboprops, and pistons).

### U.S. COMMERCIAL AIR CARRIERS AIRCRAFT FLEETS CALENDAR YEARS 2000 – 2004



Although the mainline carriers' passenger jet fleet increased slightly (up 23) in 2004, the fleet contains 442 fewer aircraft than in 2000. During this same 4-year period, the legacy carriers' fleet declined by 513 aircraft while the low-cost carriers' fleet increased by 200 aircraft.

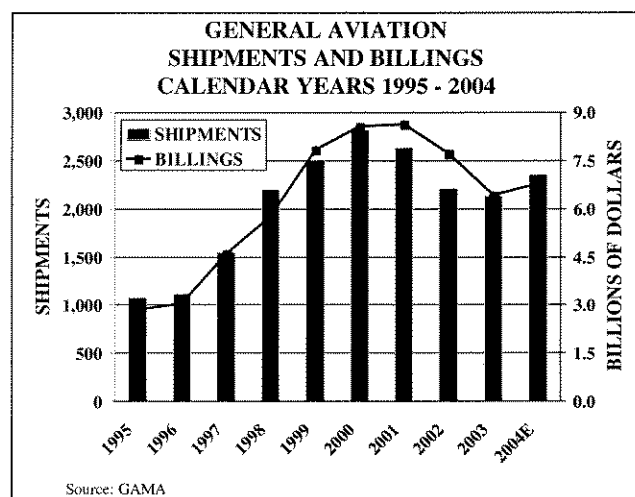
The mainline carrier cargo fleet has declined for 3 successive years—down 77 aircraft in 2002, 63 aircraft in 2003, and 19 aircraft in 2004. On the other hand, the regional/commuter passenger fleet has increased by a total of 538 aircraft since 2000. During this 4-year period, a total of 1,060 regional jets have been added to the regional carriers' fleet while the number of turboprops and pistons has declined by 522 aircraft.

Worldwide orders for commercial jet aircraft totaled 908 in 2004, an increase of 125 aircraft (16.0 percent) over 2003. Orders for narrow-body twins were up 19.0 percent (70 aircraft) while orders for the smaller regional jets were up 1.2 percent (4 aircraft). Orders for the larger Boeing and Airbus jets were up 23.2 percent (121 aircraft) in 2004, including 66 orders for the new Boeing 7E7 and Airbus A-380 aircraft.

A total of 914 commercial jet aircraft were delivered worldwide in 2004, an increase of 2.7 percent over the same period in 2003. This included delivery of 602 large jet aircraft (up 2.7 percent) and 312 regional jets (down 1.0 percent).

## GENERAL AVIATION

Based on preliminary numbers released by the General Aviation Manufacturers Association (GAMA), U.S. manufacturers of general aviation aircraft shipped a total of 2,355 aircraft during calendar year 2004. This represents an increase of 10.2 percent over the same period in 2003, and essentially ends 3 consecutive years of declines. All aircraft categories shared in the recovery—piston aircraft, up 10.6 percent; turboprops, up 19.0 percent; and jets, up 4.9 percent. Billings totaled \$6.8 billion (up 5.7 percent) in 2004, reversing 2 consecutive years of decline. Worldwide shipments and billings were up 8.8 and 17.2 percent, respectively.

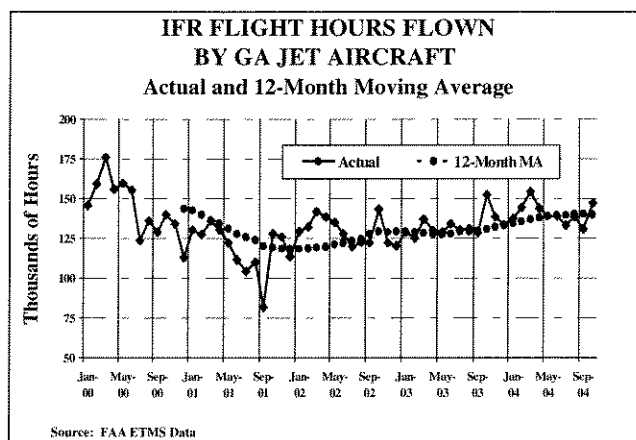


The delivery of 1,758 piston aircraft in 2004 provides additional proof that the array of new aircraft models has stimulated sales in the low end of the market. The Aerospace Industries Association of America (AIA) also foresees an upturn in general aviation shipments and billing in 2004. AIA predicts that general aviation aircraft shipments will total 2,230 (up 4.7 percent) and that industry billings will total \$6.2 billion (up 1.2 percent) in 2004.<sup>13</sup>

<sup>13</sup> 2004 Year-end Review and 2005 Forecast—An Analysis, Aerospace Industries Association of America, December 2004.

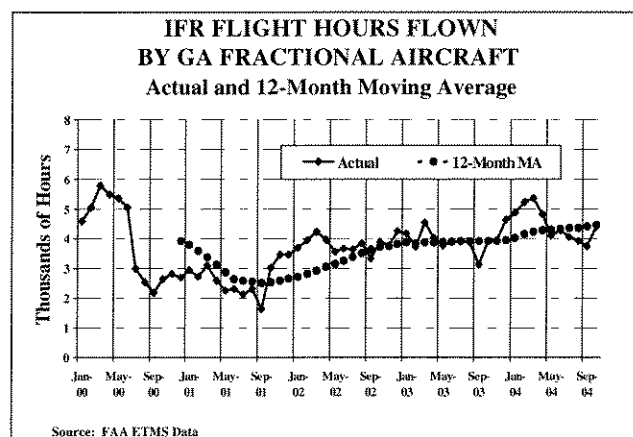
General aviation activity at FAA air traffic facilities was, for the most part, mixed in 2004. Operations at combined FAA and contract towers declined 1.6 percent in 2004 (down 12.4 percent since 2000) with itinerant and local operations down 1.2 and 2.1 percent, respectively. Instrument activity (IFR) at combined FAA and contract towers was basically flat in 2004 (down 0.2 percent) while the number of general aviation aircraft handled at FAA en route centers was up 4.4 percent.

The generally more positive numbers posted for general aviation IFR activity provides some indication that the slowdown in business/corporate and fractional ownership flying over the past several years may be turning around. Statistics from the FAA's Enhanced Traffic Management System (ETMS) database also appears to confirm the turnaround in business flying. The data show that the number of general aviation jet flights filing IFR flight plans and the number of flight hours were up 1.6 and 6.2 percent, respectively, during calendar year 2004. It is this segment of the market that appears to offer the greatest potential for future growth in the industry.



The FAA ETMS data also show that general aviation flying by fractional aircraft has continued to outpace the industry, with flights and hours flown up 5.5 and 14.0 percent, respectively, in 2004. The industry is counting on growth in fractional ownership companies

and corporate flying to expand the market for jet aircraft.



Based on preliminary results from the 2003 General Aviation and Air Taxi Activity Survey (GA Survey)<sup>14</sup>, the active general aviation fleet (210,599 aircraft) declined by 0.3 percent while flight hours (27.1 million) were basically unchanged from 2002. Based on the latest GAMA aircraft shipment statistics and FAA assumptions regarding fleet attrition and aircraft utilization, the active general aviation fleet is estimated to total 211,295 (up 0.3 percent) in 2004. Flight hours are forecast to total 27.3 million (up 0.8 percent) in 2004.

As in previous forecasts, the key to the future of general aviation continues to be increased numbers of student pilots. Based on statistics compiled by the FAA's Mike Monroney Aeronautical Center, the number of student pilots increased by 0.7 percent in 2004, the second consecutive annual increase in this important pilot category. The industry has, over the past several years, instituted a number of industry-wide programs designed to attract new pilots to general aviation. The future of the general aviation industry will depend, in large part, on how successful the industry is in continuing to rebuild and stimulate new interest in these programs.

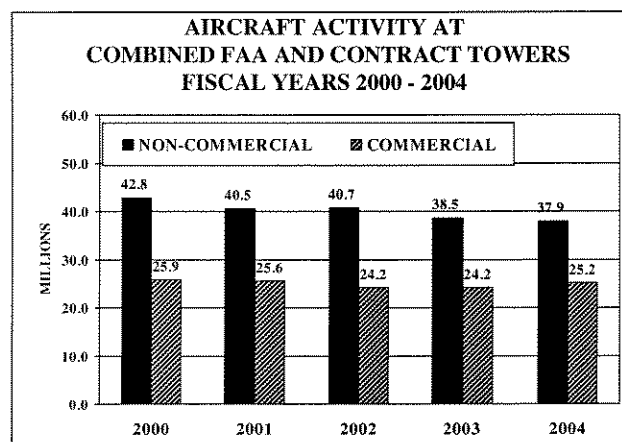
<sup>14</sup> The preliminary results are as of January 10, 2005 and are subject to change. Surveyed aircraft owners still have 3 weeks remaining to respond to the 2003 GA Survey questionnaire.

## FAA WORKLOAD

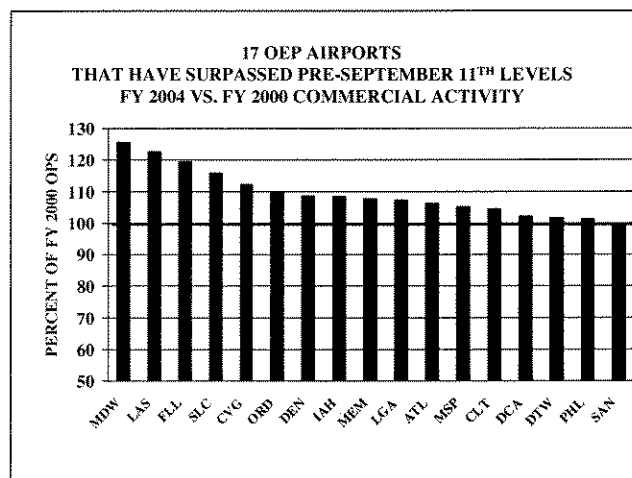
Between 1997 and 2000 the demand for both commercial and general aviation services at FAA air traffic facilities expanded significantly—up 2.6 percent annually at combined FAA and contract towers and up 3.3 percent a year at en route centers. It is this growth that gave rise to the delays that plagued many U.S. commercial airports in 2000 and 2001. Although activity at FAA air traffic facilities declined significantly following the events of September 11<sup>th</sup>, the demand for air travel has, for all intents and purposes, recovered, which has resulted in increased delays at some U.S. airports during 2004.

Total activity at combined FAA and contract tower airports totaled 63.1 million in 2004, up 0.5 percent over 2003 but still 8.2 percent below the peak activity level recorded in 2000. Commercial activity (the sum of air carrier and commuter/air taxi) at combined FAA and contract towers increased 3.7 percent in 2004. Air carrier operations (12.9 million) were up 0.8 percent in 2004 but remain 14.7 percent below their peak 2000 activity level. Commuter/ air taxi activity was up 7.0 percent in 2004 to 12.2 million--13.6 percent above its 2000 activity level. Since 2000, commuter/air taxi's share of commercial activity has increased from 41.5 to 48.6 percent.

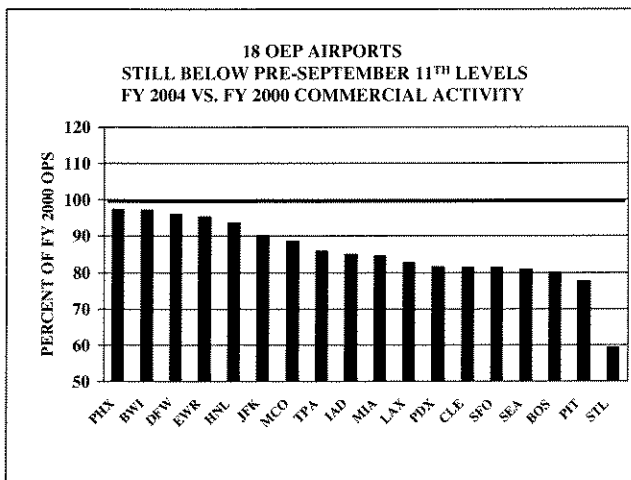
Non-commercial activity (the sum of general aviation and military) at combined FAA and contract towers declined 1.6 percent in 2004, with general aviation activity (34.9 million) down 1.6 percent and military activity (3.0 million) down 1.1 percent. At the end of 2004, non-commercial aircraft activity remains 11.3 percent below the level of activity flown in 2000.



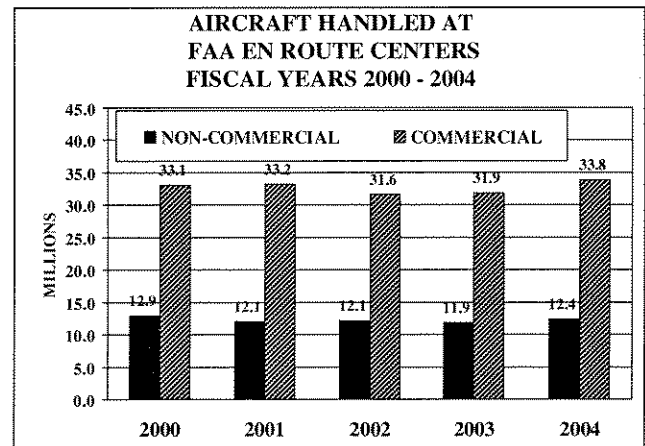
At the end of fiscal year 2004, combined commercial activity at the 35 Operational Evolution Plan (OEP) airports had recovered to within 2.7 percent of the pre-September 11<sup>th</sup> peak activity level. Seventeen airports now exceed their 2000 peak activity levels while 18 airports remain below 2000 levels.



Chicago Midway (up 25.7 percent), Las Vegas (up 22.7 percent), and Ft. Lauderdale (up 19.3 percent) have made the greatest strides in recovering from the capacity reductions implemented as a result of the events of September 11<sup>th</sup>. St. Louis (down 40.5 percent) and Pittsburgh (down 23.4 percent) have fared the worst.



During 2004, total activity at FAA en route centers (46.2 million) was up 5.6 percent, surpassing the peak 2000 activity level. Commercial activity was up 6.1 percent, with air carrier (23.9 million) and commuter/air taxi operations (10.0 million) up 4.9 and 9.1 percent, respectively. Non-commercial activity was up 4.4 percent in 2004 with both general aviation (8.4 million) and military activity (4.0 million) recording increases of 4.4 percent. Despite the relatively large growth achieved by all user groups in 2004, only commuter/air taxi exceeded its 2000 activity level—up 13.6 percent. All other user groups remain below their 2000 peak activity levels—air carrier, down 4.5 percent; general aviation, down 4.5 percent; and military, down 4.0 percent.



The number of traditional (non-automated) services provided at FAA Flight Service Stations (FSS) totaled 27.1 million in 2004, a decline of 2.2 percent from 2003. All categories of flight services decreased in 2004: flight plans originated, down 0.5 percent; pilot briefings, down 3.0 percent; and aircraft contacted, down 4.7 percent. Adding Direct User Access Terminal System (DUATS) transactions (up 13.1 percent) increases total flight services to 46.8 million, an increase of 3.7 percent over 2003.



# FAA AEROSPACE FORECASTS FISCAL YEARS 2005 – 2016

The challenges in developing forecasts of aviation demand and activity levels continue to be daunting while the uncertainties confronting the aviation industry have remained complex and difficult to quantify. Some industry analysts continue to question whether past relationships can be viewed as accurate predictors of the future. Nevertheless, the FAA has developed a set of assumptions and forecasts that is believed to be consistent with the emerging trends and structural changes currently taking place within the aviation industry.

The main assumption in developing this year's forecasts continues to be that there will not be a successful terrorist incident against either U.S. or world aviation. Additionally, the forecasts do not assume a major contraction of the industry through bankruptcy, consolidation, or liquidation.

The commercial aviation forecasts and assumptions have been developed from econometric models that attempt to explain and incorporate emerging trends for three carrier groupings—legacy network carriers, low-cost carriers, and regionals/commuters. Strategies and success levels can be expected to differ for each carrier grouping.

**Legacy Network Carriers**—This group of carriers has been the most negatively impacted by the series of unanticipated events that have occurred since September 11<sup>th</sup> and have undertaken massive restructuring efforts in an attempt to redefine themselves in light of the post September 11<sup>th</sup> operating environment and new industry realities. These carriers generally operate hub-and-spoke networks and have higher operating costs than their competitors. Their strategies since September 11<sup>th</sup> have been characterized by downsizing and cost cutting so as to lower their

operating costs more in line with those of the low-cost carriers. These efforts have, for the most part, been relatively successful in that the cost gap between the legacy carriers and their lower cost competition has narrowed considerably. However, due to the continuing string of external events over which they have little or no control profitability remains elusive to most of the carriers in this group. Two of the carriers (United and US Airways) are currently operating under Chapter 11 bankruptcy protection.

**Low-cost Carriers**—This group consists of established low-cost carriers, new entrants, as well as former network carriers that have restructured themselves into low-cost operators. Although impacted by the events of September 11<sup>th</sup>, these carriers have generally prospered and experienced relatively high growth over the past several years. These carriers generally operate point-to-point route systems and have lower operating costs than their main competition. However, several carriers operate what could be considered mini hub-and-spoke networks. Their strategy since September 11<sup>th</sup> has been one of growth—growth in the number of airports and city-pairs served, growth in nontraditional long distance transcontinental and Florida markets, and growth in the numbers of aircraft in their fleets. Unlike the larger legacy carriers, this group has generally been profitable. However, the recent spike in oil prices has also impacted the bottom line for all carriers in the group. American Trans Air (ATA) is currently operating under Chapter 11 bankruptcy protection and it is too early to determine whether Southwest's recent agreement to purchase some of ATA's assets and code-share at Midway Airport will enable the carrier to return to profitability.

**Regionals/Commuters**—This group consists of 79 carriers that operate both jet and turboprop aircraft (up to 90 seats) and whose basic mission is to provide feeder traffic to their larger code-share or equity partner's hub networks. However, several of the larger regionals/commuters now provide point-to-point service that is in direct competition with the larger network carriers. Since September 11<sup>th</sup> these carriers have benefited

significantly from network carrier route restructuring and cost cutting efforts, taking over service to many medium to long-haul markets previously served by their larger partners. For the most part, these carriers are generally profitable, receiving direct compensation from their partners either through a fixed-fee-per-flight contract or on a prorated fare basis for connecting flights. However, the poor financial health of the larger code-share partners has resulted in most fixed-fee-per-flight contracts being renegotiated at significantly lower rates during 2004.

The starting point for developing the commercial aviation forecasts (air carriers and regionals/commuters) continues to be the future schedules published in the Official Airline Guide (OAG). Using monthly schedules allows FAA forecasters to develop capacity and demand forecasts for both mainline and regionals/commuters on a monthly basis for fiscal and calendar year 2005. However, the forecasts for 2006-2016 are based on econometric models that are discussed in subsequent chapters.

The general aviation forecasts once again rely heavily on the assumptions developed at the September 2002 12<sup>th</sup> FAA/Transportation Research Board (TRB) International Workshop on Future Aviation Activities.<sup>15</sup> These assumptions have been updated by FAA economists to reflect more recent actual data, developing trends, as well as discussions with industry experts.

A final step in the FAA forecast process is the presentation of its forecasts and assumptions to industry staff and aviation associations who are asked to comment on the reasonableness of the assumptions and forecasts. Their comments and/or suggestions have been incorporated into the forecasts contained herein.

## ECONOMIC FORECASTS

The economic forecasts used by the FAA to project domestic aviation demand are provided by the Executive Office of the President, Office of Management and Budget (OMB). In addition, the FAA uses the U.S. macro economic projections of the Congressional Budget Office (CBO) as well as those of Global Insight, Inc., a commercial forecasting service. These alternative forecasts provide the FAA with a range of economic forecasts with which to gauge the risk associated with variations from the OMB projections. The FAA uses the world and individual country economic projections provided by Global Insight to forecast the demand for international aviation services.

In any given year there are likely to be variations around the long-term trend. None of the current economic models used by the FAA are sufficiently precise to predict interim business cycles. In addition, the impact from unanticipated developments, such as the 2003 war in Iraq and SARS epidemic or the run-up in oil prices in 2004 cannot be predicted with any degree of certainty.

The projected growth of aviation demand discussed in this and subsequent chapters is consistent with the national short and long-term economic growth forecasts discussed in greater detail in Chapter II. Table I-1 (page I-20) summarizes the key U.S. and world economic assumptions used in developing the domestic and international aviation demand forecasts. Annual historical data and economic forecasts are presented in tabular form in Chapter X, Tables 1 through 6.

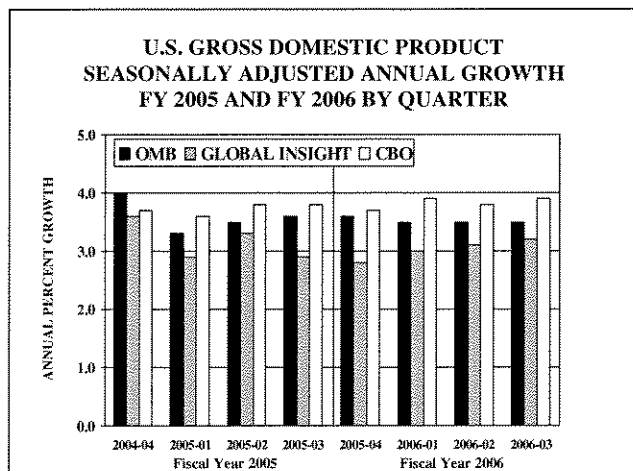
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<sup>15</sup> Transportation Research Circular Number E-C051, *Future Aviation Activities 12<sup>th</sup> International Workshop*, Transportation Research Board of the National Academies, January 2003.

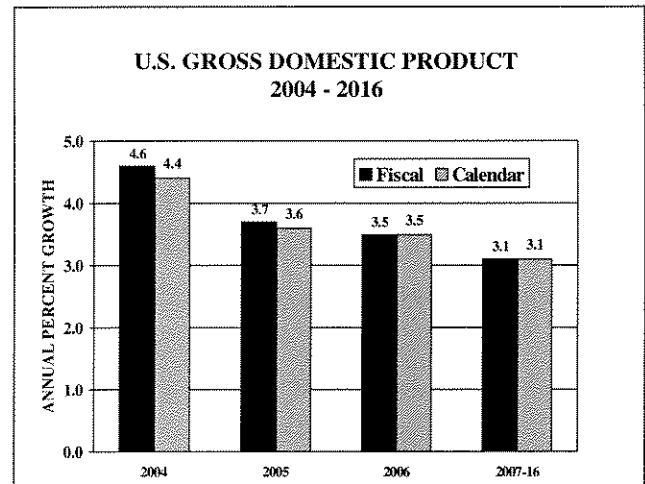
## United States Economy

While there is basic agreement among the three economic projections used by the FAA as to the general direction of the U.S. economy—strong growth in the early years of the forecast period and moderate growth thereafter—there are some discernable differences in both short and long-term growth rates. In addition, there are notable differences regarding future energy prices.

The OMB economic forecasts project that the U.S. economic recovery will be in full upswing over the next several years, with real GDP expanding by 3.7 percent in fiscal year 2005, 3.5 percent in 2006, and 3.4 percent in 2007. Global Insight forecasts slower growth in all 3 years—3.4 percent in 2005, 3.0 percent in 2006, and 3.1 percent in 2007. On the other hand, CBO projects higher growth in 2 of the 3 years—3.7 percent in 2005 and 3.8 percent in both 2006 and 2007.



Both OMB and Global Insight project U.S. real GDP to grow at an annual rate of 3.2 percent over the 12-year forecast period. CBO projects slightly slower growth (3.0 percent) over the same period.



OMB projects that energy prices (as measured by the oil and gas deflator) will increase by 21.3 percent in 2005, then decline by 9.6 percent in 2006 and 6.1 percent in 2007. Global Insight is somewhat more optimistic toward short-term oil prices, projecting an 11.5 percent increase in 2005 followed by declines of 11.5 and 1.0 percent over the following 2 years. CBO takes a considerably more pessimistic view, projecting a 17.5 percent increase in 2005 but declines of only 1.3 and 0.8 percent, respectively, in 2006 and 2007.

OMB assumes that nominal energy prices will increase at an average annual rate of 1.5 percent over the 12-year forecast period. Global Insight is more optimistic, with oil prices projected to increase by only 0.5 percent annually over the next 12 years. CBO assumes a more pessimistic long-term view, projecting oil prices to increase at an annual rate of 2.6 percent over the entire forecast period.

Both OMB and Global Insight predict that real energy prices will decline over the 12-year forecast period, down 1.0 and 1.8 percent, respectively. CBO projects that real oil prices will increase by 0.4 percent annually over the forecast period.

TABLE I-1

**ECONOMIC FORECASTS  
UNITED STATES AND WORLD  
FISCAL/CALENDAR YEARS 2005-2016**

ECONOMIC VARIABLE	HISTORICAL			FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b>UNITED STATES--Fiscal Year</b>											
Gross Domestic Product-- Chain Weighted (BIL 2000\$)	9,762.8	10,270.1	10,738.2	11,136.6	11,528.2	15,646.1	2.4	4.6	3.7	3.5	3.2
Consumer Price Index (1982-84 = 100)	170.7	183.1	187.3	192.5	196.7	250.6	2.3	2.3	2.7	2.2	2.5
Oil & Gas Deflator (2000 = 100)	96.0	103.3	116.8	141.6	127.9	139.4	5.0	13.0	21.3	(9.6)	1.5
<b>INTERNATIONAL--Calendar Year</b>											
Gross Domestic Product (In Billions of U.S. 2000\$)											
World	31,513.0	33,423.8	34,830.9	35,980.5	37,141.6	50,825.2	2.5	4.2	3.3	3.2	3.2
United States	9,817.0	10,381.4	10,836.6	11,186.8	11,524.1	15,829.0	2.5	4.4	3.2	3.0	3.2
Canada	724.8	778.7	801.7	826.5	848.7	1,119.2	2.6	3.0	3.1	2.7	2.8
Europe*	10,366.7	10,858.4	11,188.9	11,500.1	11,824.5	15,353.1	1.9	3.0	2.8	2.8	2.7
Latin America/Mexico	1,836.5	1,843.8	1,940.8	2,013.4	2,086.3	3,077.8	1.4	5.3	3.7	3.6	3.9
Pacific**	8,268.6	8,966.0	9,435.2	9,791.4	10,160.7	14,379.1	3.4	5.2	3.8	3.8	3.6
<b>EXCHANGE RATES--Calendar Year</b> (U.S.\$/Local Currency)											
Canada	0.673	0.714	0.767	0.827	0.823	0.883	3.3	7.5	7.8	(0.5)	1.2
Euro	NA	1.129	1.237	1.327	1.340	1.379	NA	9.6	7.3	1.0	0.9
United Kingdom	1.514	1.637	1.824	1.904	1.889	1.890	4.8	11.4	4.4	(0.8)	0.3
Japan***	9.279	8.625	9.214	9.846	10.182	11.717	(0.2)	6.8	6.9	3.4	2.0

Source: United States: FY 2000-2015; Executive Office of the President, Office of Management and Budget

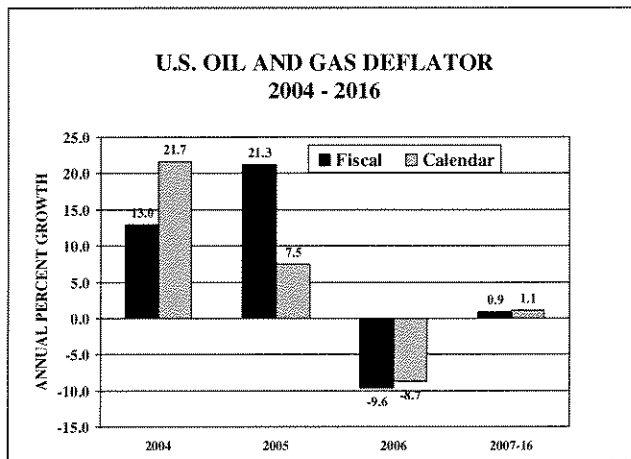
FY 2016; Consensus growth rate of Global Insight

International: CY-2000-2016, Global Insight

\* Sum of GDP for Europe, Africa, and Middle East

\*\* Sum of GDP for Japan, Pacific Basin, China, Other Asia, Australia, and New Zealand

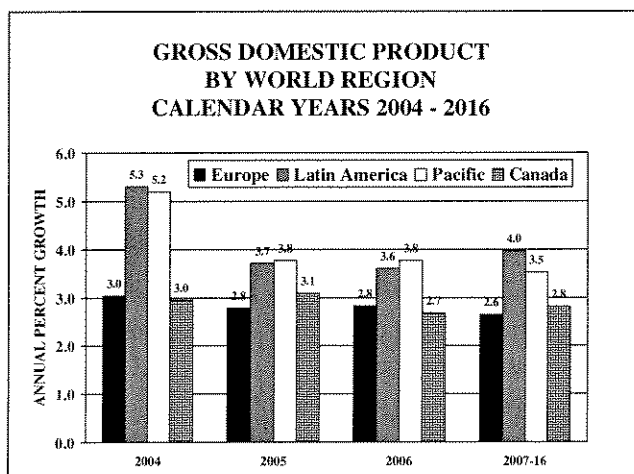
\*\*\* U.S.\$ per 1,000 Yen



OMB assumes that consumer prices (as measured by the Consumer Price Index) will remain at relatively low rates throughout the forecast period, averaging 2.5 percent annually. CBO and Global Insight both predict slightly lower prices over the 12-year forecast period—up 2.2 and 2.3 percent, respectively.

## World Economy

Worldwide economic activity is predicted to expand at rates of 3.3 and 3.2 percent, respectively, in 2005 and 2006. Over the entire 12-year forecast period, worldwide economic growth is forecast to increase at an average annual rate of 3.2 percent, the same as that of the United States.



Long-term economic growth is forecast to be greatest in the Latin American and Asia/Pacific regions, expanding at annual rates of 3.9 and 3.6 percent, respectively. Economic growth in Canada and Europe/Africa/Middle East countries are expected to average 2.8 and 2.7 percent, respectively, over the forecast period.

## AVIATION TRAFFIC AND ACTIVITY FORECASTS

Total traffic and activity forecasts for commercial air carriers (the sum of mainline carriers and regionals/commuters) are summarized in Table I-2 (page I-23). Chapter X--Tables 8 through 11--contains year-to-year historical data and forecasts.

Mainline air carrier traffic and activity forecasts are summarized in Table I-3 (page I-26) and the forecast assumptions in Table I-4 (page I-27). Chapter III contains a detailed discussion of the mainline air carrier forecasts and underlying assumptions. Chapter X--Tables 7, 12 through 20, 22, 24, and 25--contains year-to-year historical data and forecasts.

Table I-5 (page I-30) summarizes the regional/commuter forecasts and assumptions. Chapter IV provides a detailed discussion of the forecasts and assumptions. Chapter X--Tables 26 through 30--provides year-to-year historical and forecast data.

Table I-6 (page I-32) summarizes the mainline air cargo carrier forecasts. Chapter III (page III-15, pages III-46 to III-51, and III-53) provides a detailed discussion of the forecasts and assumptions. Tables 21 and 23 (Chapter X) provide year-to-year historical and forecast data.

Table I-7 (page I-35) summarizes the general aviation forecasts. Chapter V provides detailed discussions of the forecasts and assumptions.

Chapter X--Tables 31 through 35--provides year-to-year historical data and forecasts.

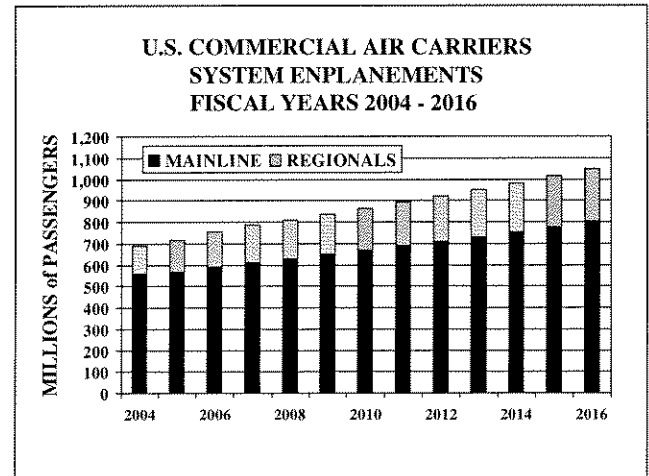
Table I-8 (page I-38) provides summary forecasts of aircraft activity at combined tower facilities. Table I-9 (page I-39) gives summary forecasts of activity at FAA facilities only, including FAA towers, en route centers, and flight service stations. Chapter VII and Tables 36 through 53 in Chapter X provide more detailed forecasts and discussion of aircraft activity at FAA and contract facilities.

Table I-10 (page I-41) provides summary domestic and international traffic forecasts on a calendar year for mainline air carriers, regionals/commuters, and air cargo carriers, as well as forecasts for IFR aircraft handled at FAA en route centers.

## Commercial Aviation Forecasts

In fiscal year 2004, the U.S. commercial aviation industry, consisting of mainline air carriers and regional/commuter airlines, flew a combined 953.6 billion ASMs. These carriers enplaned 688.5 million passengers who flew 717.4 billion RPMs, achieving an all-time high load factor of 75.2 percent. In 2004, the carriers' trip length averaged 1,042.1 miles while their aircraft averaged 135.4 seats.

In 2016, the FAA forecasts that U.S. commercial air carriers will fly a total of almost 1.6 trillion ASMs (up 4.2 percent annually) and transport over 1.0 billion enplaned passengers (up 3.6 percent annually) just under 1.2 trillion passenger miles (up 4.3 percent annually). Load factor is projected to average 76.3 percent in 2016. The passenger trip length is expected to increase to 1,139.4 miles (up 8.1 miles annually) while aircraft size increases to 139.6 seats (up 0.4 seats a year).



The combined RPMs of commercial air carriers returned to pre-September 11<sup>th</sup> levels in 2004. Passenger enplanements and ASMs are expected to return to 2000 levels in 2005.

## Mainline Air Carriers Domestic Capacity and Traffic

U.S. mainline carrier domestic capacity was up 4.9 percent in fiscal year 2004, the first annual increase in capacity since the events of September 11<sup>th</sup>. However, at the end of 2004, domestic capacity remains 5.0 percent below 2000 levels. Domestic capacity is forecast to increase 0.6 percent in 2005 and 4.8 percent in 2006, the relatively slow growth in 2005 reflecting legacy carrier capacity reductions implemented during winter 2004/05. Thereafter, capacity is expected to increase at an average annual rate of 3.5 percent over the final 10 years of the forecast period. Domestic capacity is expected to return to pre-September 11<sup>th</sup> levels in 2006.

TABLE I-2

# **AVIATION DEMAND FORECASTS TOTAL U.S. COMMERCIAL CARRIERS 1/**

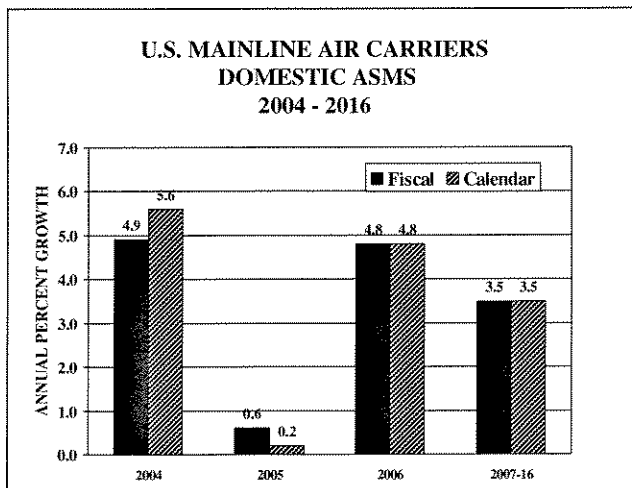
**FISCAL YEARS 2005-2016**

AVIATION ACTIVITY	HISTORICAL			FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b>Sum of U.S. Mainline Air Carriers &amp; Regionals/Commuters</b>											
<u>Enplanements (millions)</u>											
Domestic	641.2	587.9	627.2	649.6	682.7	937.3	(0.5)	6.7	3.6	5.1	3.4
International	56.4	54.1	61.3	68.0	72.2	111.2	2.1	13.2	10.9	6.2	5.1
Atlantic	20.9	17.8	19.9	21.8	23.2	32.7	(1.2)	11.7	9.3	6.6	4.2
Latin America	24.3	25.8	29.1	33.0	34.7	55.8	4.6	12.7	13.5	5.2	5.6
Pacific	11.2	10.5	12.3	13.2	14.2	22.7	2.3	17.3	7.4	8.1	5.3
System	697.6	642.0	688.5	717.5	754.9	1,048.6	(0.3)	7.2	4.2	5.2	3.6
<u>RPMs (Billions)</u>											
Domestic	512.8	492.8	540.0	559.7	592.0	858.5	1.3	9.6	3.6	5.8	3.9
International	181.8	155.9	177.4	198.0	213.6	336.3	(0.6)	13.8	11.6	7.9	5.5
Atlantic	87.1	73.2	82.1	90.8	97.3	140.2	(1.5)	12.3	10.6	7.1	4.6
Latin America	36.3	36.5	41.7	48.0	52.1	91.5	3.5	14.4	15.1	8.6	6.8
Pacific	58.4	46.2	53.5	59.1	64.2	104.7	(2.2)	15.8	10.5	8.5	5.7
System	694.6	648.6	717.4	757.8	805.5	1,194.8	0.8	10.6	5.6	6.3	4.3
<u>ASMs (Billions)</u>											
Domestic	726.6	684.4	729.9	749.5	792.2	1,138.9	0.1	6.7	2.7	5.7	3.8
International	239.3	207.0	223.7	250.3	270.3	427.2	(1.7)	8.1	11.9	8.0	5.5
Atlantic	109.9	93.7	100.5	110.1	118.7	170.9	(2.2)	7.3	9.5	7.8	4.5
Latin America	52.8	53.0	59.5	67.6	72.9	127.0	3.1	12.4	13.5	7.9	6.5
Pacific	76.6	60.3	63.6	72.6	78.7	129.2	(4.6)	5.4	14.2	8.4	6.1
System	965.9	891.3	953.6	999.7	1,062.4	1,566.1	(0.3)	7.0	4.8	6.3	4.2
<u>Load Factor (Percent)</u>											
Domestic	70.6	72.0	74.0	74.7	74.7	75.4	0.9	2.0	0.7	0.0	0.1
International	76.0	75.3	79.3	79.1	79.0	78.7	0.8	4.0	(0.2)	(0.1)	(0.0)
Atlantic	79.2	78.1	81.7	82.5	82.0	82.0	0.6	3.6	0.8	(0.5)	0.0
Latin America	68.8	68.9	70.1	71.1	71.5	72.0	0.3	1.2	1.0	0.5	0.2
Pacific	76.2	76.6	84.2	81.5	81.5	81.0	2.0	7.6	(2.7)	0.0	(0.3)
System	71.9	72.8	75.2	75.8	75.8	76.3	0.8	2.5	0.6	0.0	0.1

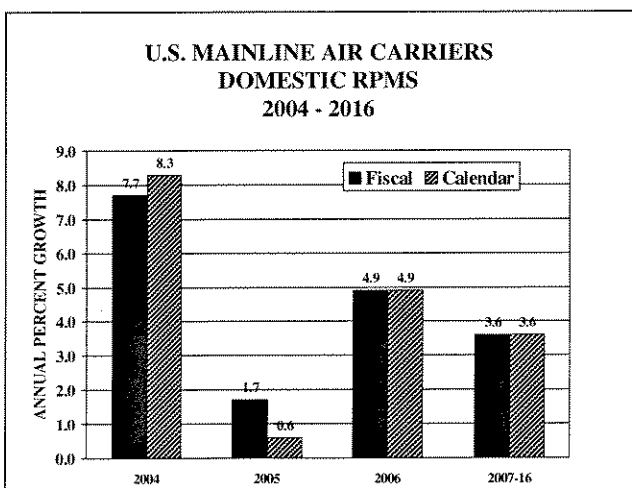
Source: 2000-2004 U.S. Air Carriers, Form 41, U. S. Department of Transportation

2005-2016: FAA Forecasts

1/ Sum of U.S. Mainline Air Carriers and Regionals/Commuters



Domestic mainline air carrier RPMs and passenger enplanements are forecast to increase at average annual rates of 3.6 and 2.8 percent, respectively, over the 12-year forecast period. Domestic RPMs are forecast to increase by 1.7 percent in 2005, 4.9 percent in 2006, and to average 3.6 percent growth over the remaining 10 years of the forecast period. Domestic enplanements are projected to increase by 0.7 percent in 2005 and 3.7 percent in 2006, the slow growth in 2005 reflecting a reduction in the number of seats flown by legacy carriers in that year. Enplanements are forecast to increase by 2.9 annually between 2007 and 2016. Much of the growth over the 12-year forecast period is expected to come from the low-cost carriers. Mainline carrier domestic RPMs are projected to return to pre-September 11<sup>th</sup> levels in 2005; enplanements not until 2009.



The domestic load factor for the mainline carriers increased to 74.7 percent in 2004 (up 2.0 percentage points), an all-time high. Load factor is expected to increase to 75.5 percent in 2005 and then increase gradually over the remainder of the forecast period, reaching 76.1 percent in 2016.

Domestic passenger yield, which declined 2.2 percent (down 4.4 percent in real terms) in 2004, is forecast to decline an additional 3.1 percent (5.7 percent in real terms) in 2005 before turning upward (0.4 percent) in 2006 and increasing at an annual rate of 1.2 percent over the remaining 10 years of the forecast period. The relatively large decline in 2005 is due, in part, to revenue dilution resulting from the industry's recent move toward fare simplification. In real terms, yields are projected to decline at an annual rate of 1.7 percent over the 12-year forecast period. Nominal domestic yields are not expected to return to pre-September 11<sup>th</sup> levels during the 12-year forecast period.

Over the past several years, the power to establish fare levels has gradually shifted from the mainline carriers to the low-cost carriers. The decline in real yields over the forecast period is based on the assumption that increased competition from low-cost carriers will continue to exert pressure on the legacy carriers to match their lower fares on competitive routes. Competition in domestic markets will come from established low-fare carriers such as Southwest, as well as smaller low-cost carriers such as AirTran, Frontier, and JetBlue. In addition, the low-cost subsidiaries of the network carriers--Delta's Song and United's Ted--will also exert downward pressure on fares and yields.

Mainline air carrier aircraft operations, which are down 14.7 percent since 2000 (up 0.8 percent in 2004), are forecast to decline by 0.3 percent in 2005, largely due to legacy carrier schedule reductions. Growth resumes in 2006 (up 3.4 percent) and grows at an average annual



rate of 2.5 percent annually over the remaining 10 years of the forecast period. Mainline air carrier operations are not expected to return to pre-September 11<sup>th</sup> activity levels until 2012.

The slower growth in air carrier activity at FAA air traffic facilities relative to expected passenger traffic growth (2.3 versus 2.8 percent growth in domestic enplanements) reflects increased efficiencies in three operational measures—aircraft size, load factor, and trip length.

The average domestic aircraft size<sup>16</sup> (mainline carriers only) is forecast to increase by 0.4 seats annually, from 149.7 seats in 2004 to 155.0 seats in 2016. Domestic load factors are expected to increase from 74.7 percent in 2004 to 76.1 percent in 2016. The domestic passenger trip length is up 87.1 miles over the past 3 years, due largely to continued legacy carrier restructuring and the transfer of medium distance routes to their regional affiliates. The passenger trip length is forecast to increase by an additional 9.7 miles in 2005 and 11.4 miles in 2006. As demand recovers, the mainline carriers are expected to resume operation of some of their medium distance routes and, as such, the growth in trip length moderates to 6.5 miles annually over the remainder of the forecast period, reaching 1,058.2 miles in 2016.

## Mainline Air Carriers International Capacity and Traffic

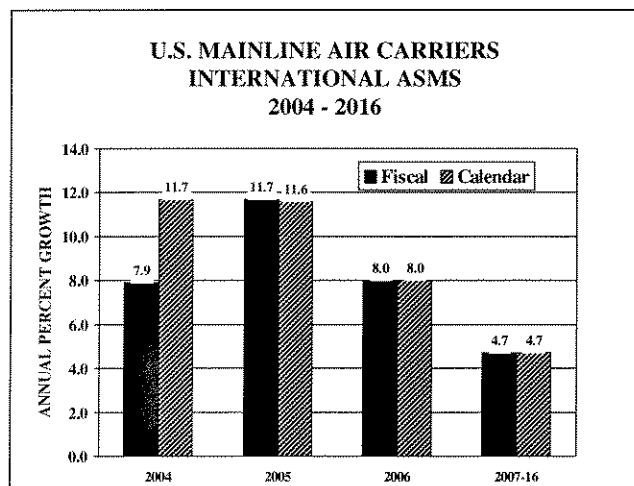
FAA provides forecasts of total international passenger demand (the sum of U.S. and foreign flag carriers) for travel between the United States and three world travel areas--Atlantic, Latin America (including Mexico and the Caribbean), and Asia/Pacific--as well as for U.S./Canadian transborder traffic. These forecasts are based on historical passenger

statistics obtained from the United States Immigration and Naturalization Services (INS) and Transport Canada and on regional world historical data and economic projections obtained from Global Insight.

Total passenger traffic between the United States and the rest of the world is estimated to total 134.0 million in calendar year 2004 (up 11.7 percent)—4.7 percent below its peak in 2000. Passenger traffic is expected to increase 8.5 percent in 2005, 6.6 percent in 2006, and to average 4.2 percent over the remaining 10 years of the forecast period, reaching 232.9 million in 2016. Total passenger traffic between the U.S. and the rest of the world is expected to return to pre-September 11<sup>th</sup> levels in 2005.

Over the entire forecast period, passenger demand is expected to be strongest in Asia/Pacific and Latin American markets, growing at annual rates of 5.5 and 5.1 percent, respectively. Passenger traffic is projected to grow 4.3 percent annually in Atlantic markets and 3.7 percent a year in Canadian transborder markets.

At the end of fiscal year 2004, U.S. air carrier international capacity remained 7.0 percent below pre- September 11<sup>th</sup> levels. International capacity is forecast to increase 11.7 percent in 2005, 8.0 percent in 2006, and 4.7 percent annually over the final 10 years of the forecast period.



<sup>16</sup> Defined as seats per mile flown and computed by dividing ASMs by miles flown.

TABLE I-3

# **AVIATION DEMAND FORECASTS MAINLINE AIR CARRIERS--PASSENGERS**

**FISCAL YEARS 2005-2016**

AVIATION ACTIVITY	HISTORICAL				FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016		00-04	03-04	04-05	05-06	04-16
<b>U.S./Foreign Flag Carriers 1/</b>												
<u>Total Passengers to/from</u>	140.6	120.0	134.0	145.4	155.0	232.9		(1.2)	11.7	8.5	6.6	4.7
<u>United States (Millions)</u>	53.0	43.8	48.4	52.0	55.2	80.3		(2.3)	10.4	7.6	6.1	4.3
Atlantic	40.8	38.7	42.8	46.0	48.8	77.9		1.2	10.5	7.5	6.0	5.1
Pacific	26.0	20.0	23.5	26.3	28.5	44.8		(2.4)	17.7	11.7	8.5	5.5
Canadian Transborder	20.8	17.5	19.3	21.1	22.5	29.8		(1.8)	10.5	9.3	6.7	3.7
<b>U.S. Air Carriers</b>												
<u>Enplanements (Millions)</u>	561.5	482.8	502.2	505.7	524.4	700.0		(2.8)	4.0	0.7	3.7	2.8
Domestic	53.3	50.6	57.3	63.0	66.9	103.0		1.9	13.4	9.8	6.3	5.0
International	20.9	17.8	19.9	21.8	23.2	32.7		(1.2)	11.7	9.3	6.6	4.2
Atlantic	21.2	22.3	25.2	28.0	29.5	47.6		4.4	12.9	11.4	5.3	5.5
Pacific	11.2	10.5	12.3	13.2	14.2	22.7		2.3	17.3	7.4	8.1	5.3
System	614.8	533.4	559.5	568.7	591.4	803.0		(2.3)	4.9	1.6	4.0	3.1
<b>RPMs (Billions)</b>												
Domestic	490.0	453.4	488.4	496.7	521.1	740.7		(0.1)	7.7	1.7	4.9	3.5
International	181.0	154.8	175.9	195.9	211.4	332.6		(0.7)	13.7	11.4	7.9	5.5
Atlantic	87.1	73.2	82.1	90.8	97.3	140.2		(1.5)	12.3	10.6	7.1	4.6
Latin America	35.5	35.4	40.3	46.0	50.0	87.8		3.2	13.7	14.2	8.7	6.7
Pacific	58.4	46.2	53.5	59.1	64.2	104.7		(2.2)	15.8	10.5	8.5	5.7
System	670.9	608.2	664.3	692.7	732.5	1,073.3		(0.2)	9.2	4.3	5.7	4.1
<b>ASMs (Billions)</b>												
Domestic	688.3	623.7	654.1	658.3	689.9	973.8		(1.3)	4.9	0.6	4.8	3.4
International	238.0	205.1	221.4	247.2	267.1	422.1		(1.8)	7.9	11.7	8.0	5.5
Atlantic	109.9	93.7	100.5	110.1	118.7	170.9		(2.2)	7.3	9.5	7.8	4.5
Latin America	51.4	51.1	57.3	64.5	69.7	121.9		2.7	12.1	12.7	8.0	6.5
Pacific	76.6	60.3	63.6	72.6	78.7	129.2		(4.6)	5.4	14.2	8.4	6.1
System	926.2	828.8	875.5	905.5	957.0	1,395.9		(1.4)	5.6	3.4	5.7	4.0
<b>Fleet (Large Jets Only) 1/</b>												
Passenger	4,488	4,023	4,046	4,151	4,320	5,999		(2.6)	0.6	2.6	4.1	3.3
Hours Flown (Millions)* 1/	14.3	13.3	13.7	14.3	14.9	20.8		(0.9)	3.1	4.0	4.2	3.5

Source: 2000-2004; U.S. Air Carriers, Form 41, U. S. Department of Transportation; Total Passengers, INS Form I-92, U.S. Department of Commerce  
2005-2016; FAA Forecasts

1/ Historical and forecast on a calendar year basis

\* Includes both passenger (excluding regional jets) and cargo aircraft.

TABLE I-4

# **AVIATION FORECAST ASSUMPTIONS MAINLINE AIR CARRIERS--PASSENGERS**

**FISCAL YEARS 2005-2016**

AVIATION ACTIVITY	HISTORICAL			FORECAST			PERCENT/POINT* AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b>Mainline Air Carriers</b>											
<u>Passenger Yields (Cents/RPM)</u>											
(In Current Dollars)											
Domestic	14.03	11.73	11.46	11.11	11.15	12.54	(4.9)	(2.3)	(3.1)	0.4	0.8
International	10.46	9.92	10.42	10.51	10.65	12.80	(0.1)	5.0	0.9	1.3	1.7
Atlantic	9.73	9.60	10.15	10.15	10.27	12.44	1.1	5.7	0.0	1.2	1.7
Latin America	13.00	12.40	12.28	12.45	12.66	15.34	(1.4)	(1.0)	1.4	1.7	1.9
Pacific	9.99	8.53	9.44	9.57	9.68	11.15	(1.4)	10.7	1.4	1.1	1.4
<b>Average Aircraft Size</b>											
(Seats per Aircraft Mile)											
Domestic	148.8	148.5	149.7	150.2	150.5	155.0	0.2	1.2	0.5	0.3	0.4
International	236.6	224.9	224.1	225.1	225.9	229.5	(3.1)	(0.8)	1.0	0.8	0.5
Atlantic	233.7	231.5	231.6	233.0	234.0	239.0	(0.5)	0.1	1.4	1.0	0.6
Latin America	179.5	171.7	174.6	175.0	175.5	180.5	(1.2)	2.9	0.4	0.5	0.5
Pacific	307.8	287.6	281.6	282.6	283.0	288.0	(6.6)	(6.0)	1.0	0.4	0.5
<b>Average Trip Length (Miles)</b>											
Domestic	872.6	939.1	972.6	982.3	993.6	1,058.2	25.0	33.5	9.7	11.4	7.1
International	3,397.3	3,061.0	3,068.3	3,112.2	3,157.9	3,228.5	(82.2)	7.4	43.8	45.8	13.3
Atlantic	4,168.1	4,105.4	4,125.7	4,174.7	4,194.3	4,288.5	(10.6)	20.3	49.0	19.6	13.6
Latin America	1,675.2	1,588.3	1,599.7	1,639.5	1,692.4	1,843.2	(18.9)	11.5	39.8	52.9	20.3
Pacific	5,219.8	4,419.5	4,365.8	4,491.2	4,508.0	4,607.6	(213.5)	(53.7)	125.4	16.8	20.2
<b>Average Load Factor (Percent)</b>											
Domestic	71.2	72.7	74.7	75.5	75.5	76.1	0.9	2.0	0.8	0.1	0.1
International	76.0	75.5	79.5	79.3	79.2	78.8	0.9	4.0	(0.2)	(0.1)	(0.1)
Atlantic	79.2	78.1	81.7	82.5	82.0	82.0	0.6	3.6	0.8	(0.5)	0.0
Latin America	69.0	69.3	70.3	71.3	71.7	72.0	0.3	1.0	0.9	0.5	0.1
Pacific	76.2	76.6	84.2	81.5	81.5	81.0	2.0	7.6	(2.7)	0.0	(0.3)

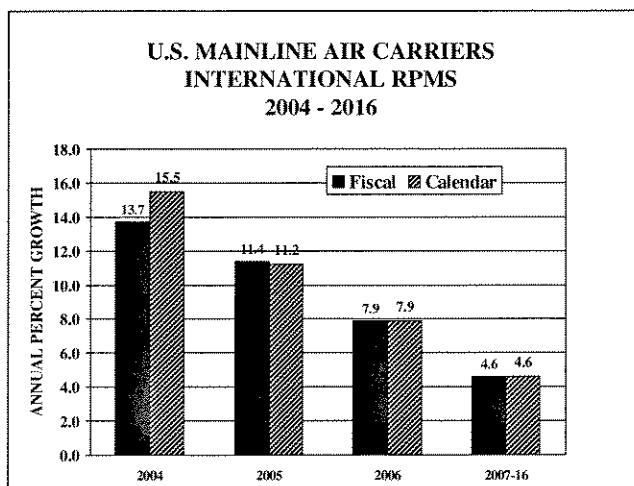
Source: 2000-2004; U.S. Air Carriers, Form 41, U. S. Department of Transportation.

2005-2016 FAA Forecasts

\* Passenger Yield, annual percent change; all other series, annual absolute change.

The relatively strong growth in 2005 and 2006 reflects projected strong growth in U.S. and world economic activity as well as the realization by U.S. mainline carriers that international markets represent their best, if not only, source of profitable operations.

U.S. mainline carrier international RPMs increased 13.7 percent in 2004 while enplanements were up 13.4 percent. International RPMs are forecast to increase 11.4 percent in 2005, 7.9 percent in 2006, and 4.6 percent annually over the remainder of the forecast period. Enplanements are projected to grow 9.8 percent in 2004, 6.3 percent in 2006, and 4.4 percent annually over the final 10 years of the forecast period, reaching 103.0 million in 2016. U.S. carrier international enplanements exceeded pre-September 11<sup>th</sup> levels in 2004 and international RPMs are expected to follow suit in 2005.



The faster growth in U.S. carrier international passenger traffic compared to total international traffic (including foreign flag carriers) over the 12-year forecast period (5.0 versus 4.7 percent) reflects gains in market share for U.S. airlines. Despite these gains, U.S. carriers are expected to continue to shift flying to their foreign flag code-share and alliance partners. These shifts enable U.S. carriers to continue to promote and sell travel to foreign travel destinations without incurring the costs of actually operating aircraft on these routes.

The forecasts of international demand assume that U.S. air carriers will benefit from the strong economic activity in both the United States and world markets. The stronger growth in international travel relative to domestic markets is being driven by the strong passenger demand projected in the Asia/Pacific and Latin American markets.

International load factors are forecast to decline slightly from the all-time high load factor (79.5 percent) achieved in 2004, fluctuating around 79.0 percent throughout the forecast period and averaging 78.8 percent in 2016.

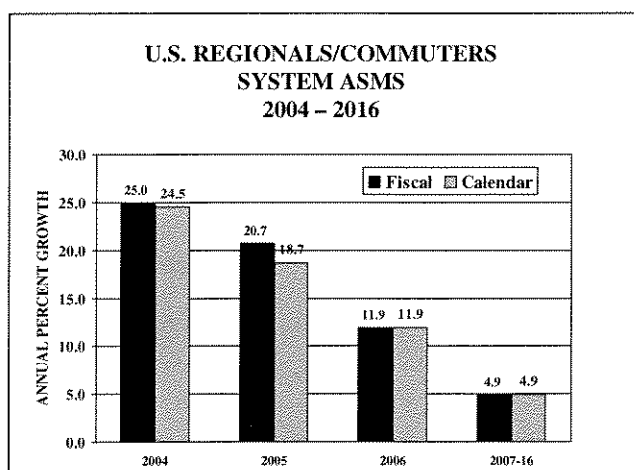
International passenger yields were up 5.0 percent in 2004, due in large part to strong yield recovery in Asia/Pacific (up 10.7 percent) and Atlantic markets (up 5.7 percent) as traffic rebounded from the impacts of the SARS epidemic and war in Iraq in 2003. International yields are expected to increase by 0.9 percent in 2005 and 1.7 percent annually over the entire forecast period, reflecting strong passenger demand in all world travel regions. In real terms, international yields decline at an annual rate of 0.7 percent over the forecast period. The decline in real yields is based on the assumption that competitive pressures will continue to exert pressure on carriers to hold the line on fare increases. In international markets, this takes the form of expanded open sky agreements and new and existing global alliances.

## Regionals/Commuters Capacity and Traffic

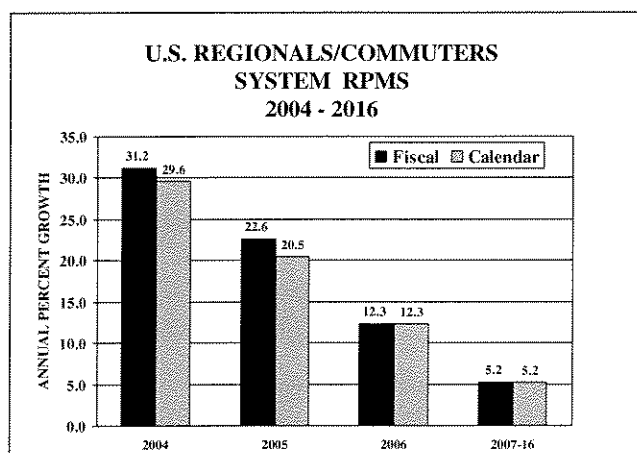
Regionals/commuters ASMs have almost doubled (up 96.9 percent) since 2000, up 97.8 percent in domestic markets and 70.8 percent in international (largely Caribbean and Mexico) markets. These large increases are due, in large part, to legacy carrier restructuring and the transfer of large numbers of routes to smaller code-share partners. Of course, these

route transfers would have been impossible without the addition of 1,060 regional jets to the fleet over this 4-year period.

Regional/commuter capacity is forecast to increase an additional 20.7 percent in 2005 and 11.9 percent in 2006, the large increases due to the projected delivery of an additional 439 regional jets over this 2-year period. Growth in capacity is expected to slow to 4.9 percent annually over the remainder of the forecast period and to average 6.7 percent over the 12-year forecast period.

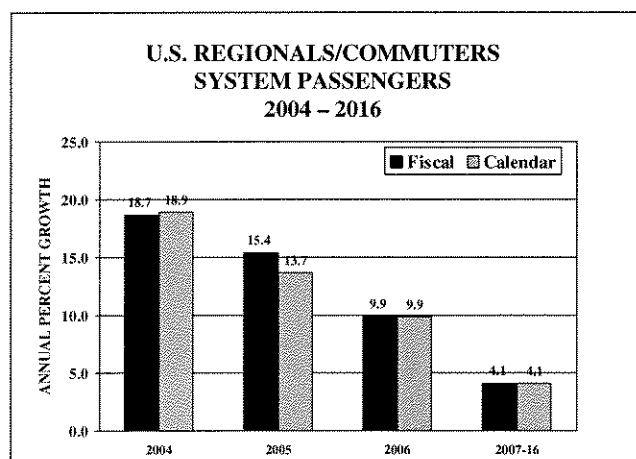


Regional/commuter RPMs have more than doubled (up 124.5 percent) since 2000, up 126.0 percent in domestic markets and 82.1 percent in international markets. RPMs are projected to increase 22.6 percent in 2005, 12.3 percent in 2006, and to average 5.2 percent over the remaining 10 years of the forecast period.



Regional/commuter carriers achieved an all-time high load factor of 67.9 percent in 2004, up 3.2 percentage points over the previous year. Load factor is projected to increase throughout the forecast period, reaching 71.3 percent in 2016.

Passenger growth is expected to be less than that forecast for RPMs, growing by 15.4 percent in 2005 and 9.9 percent in 2006. Over the 12-year forecast period, regional/commuter passengers are forecast to increase 5.5 percent a year, from 128.9 million in 2004 to 245.5 million in 2016. In 2016, regionals/commuters are expected to transport 23.4 percent of all passengers in scheduled commercial air service (domestic and international), up from 18.7 percent in 2004. In purely domestic markets, regionals/commuters are projected to transport 25.3 percent of all passengers in 2016, up from 19.9 percent in 2004.



Despite the almost doubling of capacity over the past 4 years, regional/commuter aircraft operations at FAA air traffic facilities are up only 13.6 percent over the same period. The significantly slower growth relative to ASMs is largely due to an increase in the passenger trip length of 126.1 miles over the 4-year period—from 285.5 to 411.6 miles. This longer trip length is also reflected in the number of regional/commuter aircraft handled at en route centers—up 23.2 percent over the same 4-year period. This increase at en route centers is due, in large part, to a 90.3 percent increase in the

**TABLE I-5**  
**AVIATION DEMAND FORECASTS AND ASSUMPTIONS**  
**REGIONALS/COMMUTERS**

**FISCAL YEARS 2005-2016**

AVIATION ACTIVITY	HISTORICAL			FORECAST			PERCENT/POINT* AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b><u>REGIONAL/COMMUTERS</u></b> <b><u>Enplanements (Millions)</u></b>											
Domestic	79.7	105.1	125.0	143.8	158.3	237.3	11.9	19.0	15.1	10.0	5.5
International	3.1	3.5	3.9	5.0	5.2	8.2	5.9	11.0	27.2	4.4	6.3
System	82.8	108.6	128.9	148.9	163.5	245.5	11.7	18.7	15.4	9.9	5.5
<b><u>RPMs (Billions)</u></b>											
Domestic	22.8	39.3	51.6	63.0	70.9	117.7	22.6	31.2	22.1	12.5	7.1
International	0.8	1.1	1.5	2.1	2.2	3.7	16.2	33.8	39.7	5.4	7.9
System	23.6	40.4	53.1	65.1	73.0	121.4	22.4	31.2	22.6	12.3	7.1
<b><u>ASMs (Billions)</u></b>											
Domestic	38.3	60.6	75.8	91.2	102.3	165.1	18.6	25.1	20.2	12.2	6.7
International	1.3	1.9	2.3	3.1	3.2	5.1	14.3	20.9	34.7	4.6	6.9
System	39.7	62.5	78.1	94.3	105.5	170.2	18.5	25.0	20.7	11.9	6.7
<b><u>Fleet (As of December 31) 1/</u></b>											
Turboprops/Pistons	1,704	1,216	1,182	1,156	1,130	1,001	(8.7)	(2.8)	(2.2)	(2.2)	(1.4)
Jets	570	1,349	1,630	1,857	2,069	2,960	30.0	20.8	13.9	11.4	5.1
Total	2,274	2,565	2,812	3,013	3,199	3,961	5.5	9.6	7.1	6.2	2.9
<b><u>Block to Block Hours (000) 1/</u></b>	5,359	6,087	6,677	7,181	7,642	10,246	5.7	9.7	7.5	6.4	3.6
<b><u>Average Aircraft Size</u></b> <b><u>(Seats per Aircraft Mile)</u></b>											
Domestic	38.4	44.1	46.3	48.1	49.2	54.9	2.0	2.2	1.8	1.1	0.7
International	41.8	46.4	47.5	51.2	51.7	56.7	1.4	1.1	3.7	0.5	0.8
System	38.5	44.2	46.3	48.2	49.3	54.9	2.0	2.1	1.9	1.1	0.7
<b><u>Average Trip Length (Miles)</u></b>											
Domestic	286.5	374.4	412.7	437.9	447.7	496.0	31.6	38.4	25.2	9.7	6.9
International	260.0	312.2	376.4	413.3	417.3	451.3	29.1	64.2	36.9	4.0	6.2
System	285.5	372.3	411.6	437.1	446.7	494.5	31.5	39.3	25.5	9.6	6.9
<b><u>Average Load Factor (Percent)</u></b>											
Domestic	59.5	64.9	68.0	69.1	69.3	71.3	2.1	3.1	1.1	0.2	0.3
International	60.8	58.6	64.9	67.3	67.8	72.8	1.0	6.3	2.4	0.5	0.7
System	59.6	64.7	67.9	69.0	69.2	71.3	2.1	3.2	1.1	0.2	0.3

Source: Regionals/Commuters; 2000-2004, Forms 298-C and 41, U.S. Department of Transportation; 2005-2016, FAA Forecasts  
1/ Historical and forecast data on a calendar year basis

\* Enplanements, RPMs, Fleet, and Hours Flown: annual percent change; all other series, annual absolute change.

number of overflights, that is, flights that traverse one or more en route center.

Regional/commuter activity is expected to increase 13.6 percent over the next 2 years. Thereafter, regional/commuter operations are forecast to grow at an average annual rate of 2.5 percent over the remainder of the forecast period. Slower growth in activity at FAA air traffic facilities relative to ASMs (3.2 versus 6.7 percent) and passengers compared to and RPMs (5.5 versus 7.1 percent) results from higher load factors, longer trip lengths, and the operation of larger aircraft.

Over the 12-year forecast, the average passenger trip length is forecast to increase from 411.6 miles in 2004 to 494.5 miles in 2016, an average increase of 6.9 miles annually. However, much of the growth occurs during the first 3 years of the forecast period--up an average 14.5 miles a year. The relatively large increases during this period result from two factors--the integration of large numbers of regional aircraft into the fleet and the expected continuation of the transfer of medium- to long-haul routes from their larger code-share partners. Thereafter, the passenger trip length increases 4.4 miles annually over the remainder of the forecast period.

The operation of greater numbers of the larger 70 and 90 seat regional jets also increases the average seating capacity of the regional fleet--from 46.3 seats in 2004 to 54.9 seats in 2016.

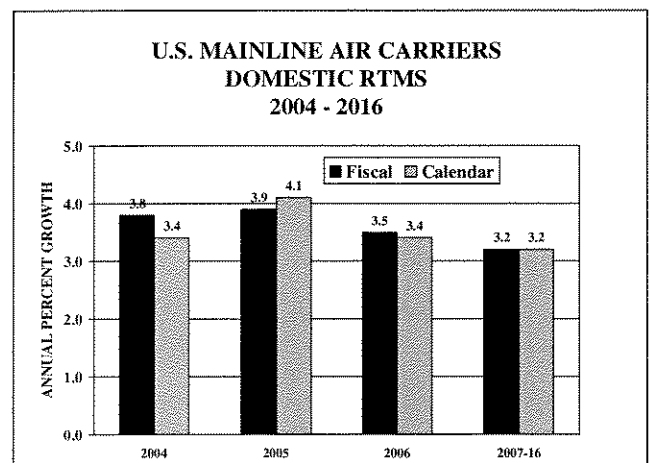
## Mainline Air Carriers

### Air Cargo

Total air cargo traffic is projected to increase at somewhat faster rates than those for projected for passenger traffic, with mainline carrier system RTMs and RPMs projected to increase at average annual rates of 5.1 and 4.1 percent, respectively, over the 12-year forecast period. Domestic RTMs

are forecast to increase 3.3 percent annually (versus 3.5 percent for domestic RPMs) while international RTMs are projected to increase 6.3 percent a year (versus 5.5 percent for international RPMs).

Domestic RTMs are forecast to increase 3.9 percent in 2005, 3.5 percent in 2006, and to average 3.2 percent over the final 10 years of the forecast period. Most of the growth in the demand for domestic cargo services is forecast to occur among all-cargo carriers due to the inherent advantages of the integrated carriers. All-cargo carrier domestic RTMs are projected to increase 3.7 percent a year over the entire forecast period, compared with growth of only 1.7 percent annually for passenger carriers. All-cargo carriers' share of domestic RTMs is forecast to increase from 75.9 percent in 2004 to 80.0 percent in 2016.



International RTMs are forecast to increase 6.7 percent in 2005, 6.5 percent in 2006, and to average 6.3 percent annually over the rest of the forecast period. This relatively strong growth is due to trade expansion and new U.S. carrier route authority to fly to China. All-cargo and passenger carrier international RTMs are projected to increase at annual rates of 6.9 and 5.4 percent, respectively, over the 12-year forecast period. All-cargo carriers' share of international RTMs is projected to increase from 59.7 percent in 2004 to 63.6 percent in 2016.

**TABLE I-6**  
**AVIATION DEMAND FORECASTS**  
**MAINLINE AIR CARRIERS--AIR CARGO**

**FISCAL YEARS 2005-2016**

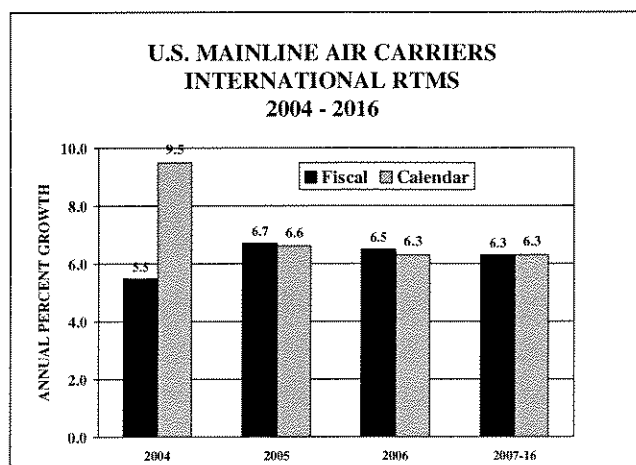
AVIATION ACTIVITY	HISTORICAL			FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b><u>Total Cargo RTMs (Millions)</u></b>											
Domestic	14,699	14,972	15,542	16,143	16,707	22,884	1.4	3.8	3.9	3.5	3.3
International	15,358	18,542	19,567	20,881	22,248	40,940	6.2	5.5	6.7	6.5	6.3
System	30,057	33,514	35,108	37,024	38,954	63,824	4.0	4.8	5.5	5.2	5.1
<b><u>Total RTMs--Passenger Airlines</u></b>											
Domestic	4,415	3,819	3,752	3,842	3,918	4,577	(4.0)	(1.8)	2.4	2.0	1.7
International	7,790	6,775	7,884	8,346	8,820	14,902	0.3	16.4	5.9	5.7	5.4
System	12,205	10,594	11,636	12,187	12,738	19,479	(1.2)	9.8	4.7	4.5	4.4
<b><u>% RTMs--Passenger Airlines</u></b>											
Domestic	30.0	25.5	24.1	23.8	23.5	20.0					
International	50.7	36.5	40.3	40.0	39.6	36.4					
System	40.6	31.6	33.1	32.9	32.7	30.5					
<b><u>Total RTMs--All-Cargo Airlines</u></b>											
Domestic	10,284	11,153	11,790	12,302	12,789	18,307	3.5	5.7	4.3	4.0	3.7
International	7,568	11,767	11,683	12,535	13,428	26,038	11.5	(0.7)	7.3	7.1	6.9
System	17,852	22,920	23,472	24,837	26,216	44,345	7.1	2.4	5.8	5.6	5.4
<b><u>% RTMs--All-Cargo Airlines</u></b>											
Domestic	70.0	74.5	75.9	76.2	76.5	80.0					
International	49.3	63.5	59.7	60.0	60.4	63.6					
System	59.4	68.4	66.9	67.1	67.3	69.5					
<b><u>Cargo Aircraft 1/</u></b>	1,064	993	974	996	1,011	1,312	(2.2)	(1.9)	2.3	1.5	2.5

Source: 2000-2004; U.S. Air Carriers, Form 41, U. S. Department of Transportation.

2005-2016; FAA Forecasts

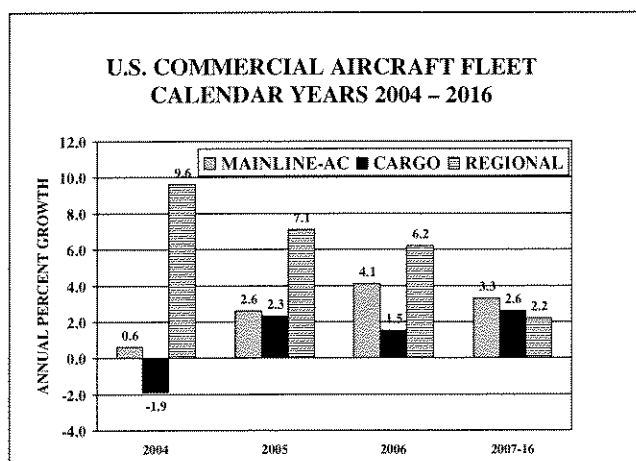
1/ Historical and forecast data on a calendar year basis





## Commercial Aircraft

The number of commercial aircraft is forecast to grow from 7,832 in 2004 to 11,272 in 2016, an average annual growth rate of 3.1 percent or 287 aircraft annually. The commercial fleet grows by 328 aircraft in 2005 and 370 aircraft in 2006; however, most of this growth occurs among regional/commuters and low-cost carriers.



The number of large passenger jets (over 90 seats) increased by 23 aircraft in 2004 and is expected to increase by an additional 105 in 2005 aircraft and 169 aircraft in 2006. Over the remaining 10 years of the forecast period, the mainline air carrier passenger fleet increases by an average of 168 aircraft a year, reaching a total of 5,999 aircraft in 2016. The narrow-body fleet

(including JetBlue's regional jets) is projected to grow by 153 aircraft annually over the 12-year forecast period; the wide-body fleet grows by less than 10 aircraft a year.

The regional/commuter passenger fleet is forecast to increase by 543 aircraft over the next 3 years--201 in 2005, 186 in 2006, and 156 in 2007. Thereafter, the regional/commuter fleet is expected to increase by an average of 67 aircraft (1.9 percent) over the remaining 9 years of the forecast period, reaching a total of 3,961 aircraft in 2016. The number of regional jets (up to 90 seats) in regional/commuter service is projected to grow from 1,630 in 2004 to 2,960 in 2016, an average annual increase of 5.1 percent. Much of the growth in regional jets over the forecast period occurs in the larger 70 and 90 seat aircraft (825 compared to 505 aircraft with 50 or less seats), reflecting the relaxation of scope clauses. The turboprop/piston fleet is expected to decline from 1,182 in 2004 to 1,001 in 2016. Turboprop/piston aircraft are expected to account for just over a quarter of the regional fleet in 2016, down from a 42.0 percent share in 2004.

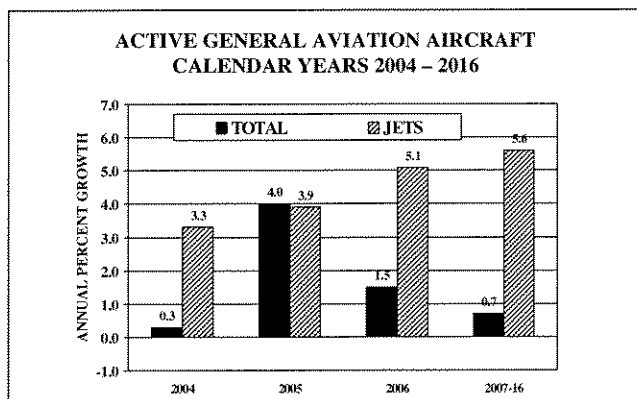
Cargo large jet aircraft are forecast to increase by 58 aircraft over the next 3 years (from 974 to 1,032 aircraft in 2007), and total 1,312 aircraft in 2016. The narrow-body jet fleet is projected to decline by almost 2 aircraft per year over the 12-year forecast period. The wide-body jet fleet, including the Airbus A-380 jumbo jet, is projected to increase by 30 aircraft yearly.

## General Aviation

Despite a slowdown in the demand for business jets over the past several years, the current forecast assumes that business use of general aviation aircraft will expand at a more rapid pace than that for personal/sport use. The business/corporate side of general aviation should continue to benefit from a growing

market for new microjets. In addition, corporate safety/security concerns for its corporate staff, combined with increased processing times at some U.S. airports have made fractional, corporate, and on-demand charter flights viable alternatives to travel on commercial flights. The extension of the bonus depreciation provision to December 31, 2005 should also help stimulate business jet sales.

The active general aviation fleet is projected to increase at an average annual rate of 1.1 percent (0.5 percent excluding the new light sport aircraft) over the 12-year forecast period, growing from an estimated 211,295 in 2004 to 240,070 aircraft in 2016. The more expensive and sophisticated turbine-powered fleet (including rotorcraft) is projected to grow at an average annual rate of 3.2 percent over the 12-year forecast period. However, the jet fleet is responsible for most of this growth, increasing from 8,425 in 2004 to 15,900 in 2016, an average annual increase of 5.4 percent.



At the September 2002 TRB/FAA workshop, the Business Aviation Panel suggested that the market for new microjets could add an additional 5,000 aircraft to the active fleet by 2010. The relatively inexpensive twin-engine microjets (priced between \$1 and \$2 million) are believed to have the potential to redefine the business jet segment by expanding business jet flying and offering performance that could support a true on-demand air-taxi business service. This year's forecast assumes that microjets will begin to enter the active fleet in

2006 (100 aircraft) and grow by between 400 to 500 aircraft a year thereafter, reaching a total of 4,500 aircraft by 2016.

The numbers of piston-powered aircraft (including rotorcraft) are projected to increase from 163,940 in 2004 to 167,805 in 2016, an average increase of only 0.2 percent annually. This slow growth is due to declining numbers of multi-engine aircraft and the attrition of approximately 1,500 single engine aircraft annually. In addition, it is assumed that the relatively inexpensive microjets and new light sport aircraft could dilute or weaken the replacement market for piston aircraft. Single engine pistons and piston rotorcraft are forecast to increase at annual rates of 0.2 and 1.2 percent, respectively, over the 12-year forecast period.

Starting in 2005, owners of ultralight aircraft (not currently included in the FAA's aircraft registry counts) can begin registering these aircraft as "light sport" aircraft. The forecast assumes registration of 10,000 aircraft over a 2-year period beginning in 2005. In addition, it is projected that approximately 300-500 newly manufactured light sport aircraft will enter the active fleet on an annual basis beginning in 2007. This new aircraft category is expected to total 15,410 in 2016.

The number of general aviation hours flown is projected to increase by 1.6 percent (1.4 percent excluding the new light sport aircraft) annually on the 12-year forecast period. Much of the increase reflects increased flying by business and corporate aircraft as well as increased utilization rates on most general aviation aircraft.

Hours flown by turbine aircraft (including rotorcraft) are forecast to increase 4.1 percent yearly over the forecast period, compared with only 0.3 percent for piston-powered aircraft. Jet aircraft are forecast to account for the majority of the increase, expanding at an average annual rate of 6.7 percent over the 12 years. The large

TABLE I-7

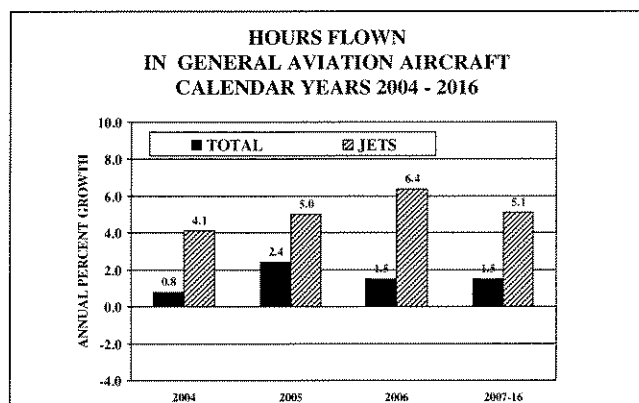
# AVIATION DEMAND FORECASTS AND ASSUMPTIONS GENERAL AVIATION

## CALENDAR YEARS 2005-2016

AVIATION ACTIVITY	HISTORICAL			FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b>GENERAL AVIATION</b>											
Total Active Fleet (000)	217.5	210.6	211.3	219.8	223.1	240.1	(0.7)	0.3	4.0	1.5	1.1
Total less Sport Aircraft (000)	217.5	210.6	211.3	212.1	213.1	224.7	(0.7)	0.3	0.4	0.5	0.5
Pistons	170.5	161.6	161.7	161.8	162.0	165.2	(1.3)	0.0	0.1	0.1	0.2
Single Engine	149.4	143.9	144.0	144.2	144.4	148.0	(0.9)	0.1	0.1	0.2	0.2
Multi-Engine	21.1	17.7	17.7	17.6	17.6	17.2	(4.3)	(0.1)	(0.3)	(0.2)	(0.2)
Turbine	12.8	15.4	15.7	16.2	16.7	24.3	5.4	2.4	2.7	3.4	3.7
Turboprops	5.8	7.2	7.3	7.4	7.5	8.4	6.1	1.4	1.4	1.4	1.2
Turbojets	7.0	8.2	8.4	8.8	9.2	15.9	4.7	3.3	3.9	5.1	5.4
Rotorcraft	7.2	6.8	6.9	7.0	7.1	7.9	(0.9)	1.5	1.4	1.4	1.2
Experimental	20.4	20.6	20.8	21.0	21.2	21.4	0.5	1.0	1.0	0.9	0.2
Sport Aircraft	NA	NA	NA	7.7	10.0	15.4	NA	NA	NA	29.9	NA
Other	6.7	6.2	6.2	6.2	6.1	5.8	(2.0)	(0.5)	(0.5)	(0.5)	(0.5)
<b>Total Hours Flown (Mil)</b>											
Total less Sport Aircraft (Mil)	30.0	27.0	27.3	27.9	28.3	32.8	(2.3)	0.8	2.4	1.5	1.6
Pistons	21.5	18.8	18.8	18.9	18.9	19.5	(3.3)	0.2	0.2	0.3	0.3
Single Engine	18.1	16.5	16.5	16.6	16.6	17.3	(2.2)	0.2	0.3	0.3	0.4
Multi-Engine	3.4	2.3	2.3	2.3	2.3	2.2	(9.3)	(0.3)	(0.4)	(0.2)	(0.3)
Turbine	4.6	4.5	4.6	4.8	5.0	8.3	0.0	3.2	3.7	4.6	5.0
Turboprops	2.0	1.8	1.8	1.9	1.9	2.2	(2.2)	1.8	1.6	1.6	1.4
Turbojets	2.6	2.7	2.8	3.0	3.2	6.2	1.6	4.1	5.0	6.4	6.7
Rotorcraft	2.2	2.2	2.2	2.3	2.3	2.6	0.4	1.5	1.8	1.3	1.3
Experimental	1.3	1.3	1.3	1.3	1.3	1.4	0.4	0.3	1.2	1.1	0.4
Sport Aircraft	NA	NA	NA	0.4	0.5	0.8	NA	NA	NA	29.9	NA
Other	0.4	0.3	0.3	0.3	0.3	0.3	(7.0)	(1.8)	0.0	0.0	(0.3)
<b>Total Aircraft Utilization (Hrs)</b>											
Total less Sport Aircraft (Hrs)	137.7	128.4	129.0	126.9	127.0	136.7	(1.6)	0.4	(1.6)	0.0	0.5
Pistons	126.0	116.2	116.4	116.5	116.7	118.0	(2.0)	0.1	0.1	0.1	0.1
Turbine	363.1	292.8	295.1	297.8	301.2	342.2	(5.1)	0.8	0.9	1.1	1.2
Rotorcraft	306.4	322.8	322.9	324.3	324.2	328.5	1.3	0.0	0.4	(0.0)	0.1
<b>Total Active Pilots (000)</b>											
Total less Sport Pilots (000)	631.6	625.0	618.6	635.0	647.6	750.3	(0.5)	(1.0)	2.7	2.0	1.6
Instrument Rated Pilots (000)	315.1	315.4	313.5	318.5	324.0	379.2	(0.1)	(0.6)	1.6	1.7	1.6

Source: Fleet and Hours: 2000-2003, FAA General Aviation and Air Taxi Activity Survey; 2004-2016, FAA Forecasts  
Pilots: 1995-2004, FAA Aeronautical Center; 2005-2016, FAA Forecasts

increases in jet hours are due to expected increases in the fractional ownership fleet and its activity levels. Fractional ownership aircraft average approximately 1,200 hours annually compared to only 360 hours for all business jets. In addition, the introduction of the new microjets will increase the number of flights and hours flown by on-demand air taxis.



The number of active general aviation pilots (excluding air transport pilots) is projected to total 575,790 in 2016, an increase of almost 100,000 (up 1.6 percent annually) over the forecast period. A large part of this growth is due to the certification of 11,900 new sport pilots over the forecast period. However, almost two-thirds of the expected growth (64,564 pilots) is projected to occur in the private and commercial categories, reflecting the expected increase in the demand for pilots among fractional ownership companies, business corporations, and on-demand charter operations. The number of private pilots is projected to total 273,600 (up 1.2 percent annually) in 2016. Commercial pilots are forecast to increase from 122,592 in 2004 to 149,550 in 2016, an average annual increase of 1.7 percent. Almost 21,000 new student pilots are projected to be certificated over the 12-year forecast period. The number of student pilots increase from 87,910 in 2004 to 108,800 in 2016, an average annual rate of 1.8 percent.

## FAA Workload Forecasts

There were 489 towered airports at the end of September 2004--266 FAA towers and 223 contract towers. While the number of FAA towers is expected to remain constant at 266 in 2005, the number of FAA contract towered airports is forecast to increase by 11 brand new towers to 234. In 2004, aircraft activity at these 11 airports totaled approximately 1.1 million operations, with general aviation accounting for 87.2 percent of the total activity.

### FAA and Contract Towers

Activity at the combined FAA and contract towers totaled 63.1 million operations in 2004, an increase of 0.5 percent over 2003. Activity is expected to increase 2.6 percent in 2005, 2.8 percent in 2006, and 1.7 percent annually over the remaining 10 years of the forecast period, reaching 78.9 million operations in 2016. Total activity at combined FAA/contract towers is not expected to return to pre-September 11<sup>th</sup> levels until 2008.

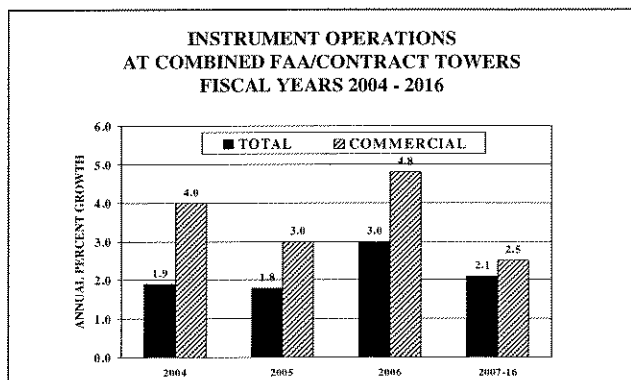
Most of the growth over the 12-year forecast period results from increased commercial aircraft activity (up 2.8 percent annually). Air carrier activity is projected to increase 0.9 percent in 2005, 2.2 percent in 2006, and average 2.5 percent annually over the remaining 10 years of the forecast period. Commuter/air taxi operations are expected to increase by 6.9 percent in 2005, 6.3 percent in 2006, and by 2.5 percent annually over the remainder of the forecast period.

General aviation activity (down 1.7 percent in 2004) is forecast to increase by 1.8 percent in both 2005 and 2006 and then grow at an annual rate of 1.2 percent over the remainder of the forecast period, reaching 40.9 million operations in 2016. Much of the growth in 2005 and 2006

results from additional activity at the 11 new contract towers that was not in the previous database. General aviation activity at combined FAA/contract towers is not expected to return to pre-September 11<sup>th</sup> levels until 2014.

Military activity, which declined by 1.1 percent in 2004, is expected to increase by 1.8 percent in 2005. This increase is also due to activity at the 11 new contract towers. Military activity is held constant at the 2005 activity level (3.0 million) throughout the remainder of the forecast period.

Combined instrument operations counts at FAA and contract towered airports (49.1 million) was up 1.9 percent in 2004. Instrument activity is expected to increase 2.0 percent in 2005 and 2.8 percent in 2006, the slower growth in 2005 reflecting schedule reductions implemented by some legacy carriers in winter 2004/2005. Thereafter, instrument operations increase at an average annual rate of 2.1 over the remainder of the forecast period, totaling 63.4 million operations in 2016. Instrument activity at combined FAA/contract towers is expected to return to pre-September 11<sup>th</sup> levels in 2008.

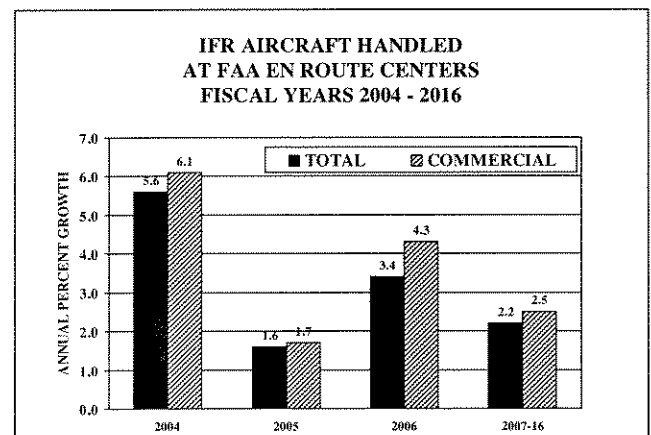


Commercial aircraft instrument operations are forecast to increase at almost double the rate of general aviation instrument operations, up 2.7 versus 1.5 percent over the forecast period. Military activity is expected to remain constant at its 2004 level of activity throughout the forecast period.

## En Route Centers

The number of IFR aircraft handled at FAA en route traffic control centers increased 5.6 percent to 46.2 million in 2004. All user groups shared in the growth in 2004--commuter/air taxi up 9.1 percent; air carrier up 4.9 percent; and general aviation and military both up 4.4 percent. Activity at en route centers is forecast to increase by 2.5 percent in both 2005 and 2006. En route activity then increases by 2.3 percent annually over the remainder of the forecast period, reaching a total of 60.2 million aircraft handled in 2016. Activity at FAA en route centers exceeded pre-September 11<sup>th</sup> levels in 2004.

The number of commercial aircraft handled is projected to increase 2.6 percent annually while general aviation en route activity increases 1.7 percent a year over the forecast period. Military activity is held constant at the 2004 activity level throughout the forecast period.



Activity at FAA en route centers is growing faster than at FAA towered airports because more of the activity in en route centers is from the faster growing commercial sector. Much general aviation activity, which is growing more slowly, is local in nature and does not impact the centers.

TABLE I-8

# **AVIATION ACTIVITY FORECASTS COMBINED FAA AND CONTRACT TOWERS**

**FISCAL YEARS 2005-2016**

ACTIVITY MEASURES		HISTORICAL			FORECAST			PERCENT AVERAGE ANNUAL GROWTH					
(In Millions)		2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16	
<b><u>NUMBER OF TOWERS</u></b>													
FAA Towers		288	266	266	266	266	266						
FAA Contract Towers		165	218	223	234	234	234						
TOTAL		453	484	489	500	500	500						
<b><u>AIRCRAFT OPERATIONS</u></b>													
Air Carrier		15.2	12.8	12.9	13.0	13.3	17.1	(3.9)	0.8	0.9	2.2	2.3	
Commuter/Air Taxi		10.8	11.4	12.2	13.1	13.9	17.8	3.2	7.0	6.9	6.6	3.2	
General Aviation		39.9	35.5	34.9	35.6	36.2	40.9	(3.3)	(1.6)	1.8	1.8	1.3	
Itinerant GA		22.8	20.2	20.0	20.3	20.7	23.7	(3.3)	(1.2)	1.8	1.9	1.4	
Local GA		17.0	15.3	14.9	15.2	15.5	17.2	(3.2)	(2.3)	1.8	1.7	1.2	
Military		2.9	3.0	3.0	3.0	3.0	3.0	0.7	(1.1)	1.8	0.0	0.1	
Itinerant MIL		1.4	1.5	1.5	1.5	1.5	1.5	0.9	(2.1)	2.4	0.0	0.2	
Local MIL		1.4	1.5	1.5	1.5	1.5	1.5	0.5	(0.1)	1.2	0.0	0.1	
TOTAL		68.7	62.8	63.1	64.7	66.5	78.9	(2.1)	0.5	2.6	2.8	1.9	
<b><u>INSTRUMENT OPERATIONS</u></b>													
Air Carrier		16.5	14.0	14.2	14.2	14.6	18.7	(3.8)	1.3	0.3	2.8	2.3	
Commuter/Air Taxi		11.6	12.3	13.2	14.1	14.9	19.1	3.2	7.1	6.5	6.3	3.1	
General Aviation		21.2	18.6	18.6	18.7	18.8	22.3	(3.3)	(0.2)	0.5	0.7	1.5	
Military		3.5	3.3	3.2	3.2	3.2	3.2	(2.6)	(3.6)	0.0	0.0	0.0	
TOTAL		52.9	48.2	49.1	50.1	51.6	63.4	(1.8)	1.9	2.0	2.8	2.1	

Source: FY 2000-2016, FAA Data and Forecasts

TABLE I-9

# **AVIATION ACTIVITY FORECASTS FAA FACILITIES**

**FISCAL YEARS 2005-2016**

ACTIVITY MEASURES (In Millions)	HISTORICAL			FORECAST		PERCENT AVERAGE ANNUAL GROWTH					
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b><u>AIRCRAFT OPERATIONS</u></b>											
Air Carrier	14.9	12.6	12.7	12.8	13.1	16.8	(3.9)	0.8	0.9	2.2	2.3
Commuter/Air Taxi	9.2	9.9	10.6	11.3	12.1	15.4	3.7	7.7	6.5	6.3	3.1
General Aviation	27.0	22.6	21.7	21.8	21.9	24.8	(5.3)	(3.8)	0.4	0.5	1.1
Itinerant GA	16.3	13.6	13.2	13.2	13.3	15.3	(5.2)	(3.0)	0.5	0.7	1.2
Local GA	10.7	9.0	8.6	8.6	8.6	9.6	(5.5)	(5.1)	0.2	0.3	0.9
Military	2.0	1.9	1.8	1.8	1.8	1.8	(2.4)	(4.4)	0.0	0.0	0.0
Itinerant MIL	1.1	1.1	1.0	1.0	1.0	1.0	(2.3)	(6.7)	0.0	0.0	0.0
Local MIL	0.9	0.9	0.8	0.8	0.8	0.8	(2.5)	(1.6)	0.0	0.0	0.0
<b>TOTAL</b>	<b>53.2</b>	<b>47.0</b>	<b>47.0</b>	<b>47.8</b>	<b>49.0</b>	<b>58.9</b>	<b>(3.1)</b>	<b>(0.2)</b>	<b>1.9</b>	<b>2.3</b>	<b>1.9</b>
<b><u>INSTRUMENT OPERATIONS</u></b>											
Air Carrier	16.4	13.9	14.1	14.1	14.5	18.6	(3.8)	1.3	0.3	2.8	2.3
Commuter/Air Taxi	11.2	12.0	12.8	13.7	14.5	18.6	3.4	7.2	6.5	6.3	3.1
General Aviation	20.9	18.3	18.3	18.4	18.5	22.0	(3.3)	(0.3)	0.5	0.8	1.5
Military	3.5	3.2	3.1	3.1	3.1	3.1	(2.7)	(3.8)	0.0	0.0	0.0
<b>TOTAL</b>	<b>52.1</b>	<b>47.4</b>	<b>48.3</b>	<b>49.3</b>	<b>50.7</b>	<b>62.3</b>	<b>(1.9)</b>	<b>1.9</b>	<b>2.0</b>	<b>2.8</b>	<b>2.1</b>
<b><u>IFR AIRCRAFT HANDLED</u></b>											
Air Carrier	25.0	22.7	23.9	24.2	24.6	31.5	(1.2)	4.9	1.5	1.6	2.3
Commuter/Air Taxi	8.1	9.1	10.0	10.6	11.3	14.5	5.4	9.1	6.5	6.3	3.1
General Aviation	8.7	8.0	8.4	8.5	8.6	10.2	(1.1)	4.4	1.7	1.5	1.7
Military	4.2	3.9	4.0	4.0	4.0	4.0	(1.0)	4.4	0.0	0.0	0.0
<b>TOTAL</b>	<b>46.0</b>	<b>43.7</b>	<b>46.2</b>	<b>47.4</b>	<b>48.5</b>	<b>60.2</b>	<b>0.1</b>	<b>5.6</b>	<b>2.5</b>	<b>2.5</b>	<b>2.2</b>
<b><u>FLIGHT SERVICES</u></b>											
Pilot Briefs	7.7	7.0	6.8	6.7	6.7	7.6	(3.1)	(3.0)	(2.1)	0.6	0.9
Flight Plans Originated	5.9	5.4	5.4	5.3	5.3	5.6	(2.3)	(0.5)	(1.2)	(0.6)	0.3
Aircraft Contacted	3.2	2.8	2.7	2.6	2.6	3.0	(4.3)	(4.7)	(2.3)	0.2	0.9
<b>TOTAL</b>	<b>30.5</b>	<b>27.7</b>	<b>27.1</b>	<b>26.6</b>	<b>26.6</b>	<b>29.3</b>	<b>(2.9)</b>	<b>(2.2)</b>	<b>(1.7)</b>	<b>0.1</b>	<b>0.7</b>
DUATS	15.0	17.5	19.8	21.1	22.1	28.4	7.1	13.0	6.8	4.6	3.1
<b>TOTAL (w/DUATS)</b>	<b>45.5</b>	<b>45.1</b>	<b>46.8</b>	<b>47.7</b>	<b>48.7</b>	<b>57.7</b>	<b>0.7</b>	<b>3.7</b>	<b>1.8</b>	<b>2.1</b>	<b>1.8</b>

Source: FY 2000-2016, FAA Data and Forecasts

## Flight Service Stations

Total flight services (non-automated) originating at traditional FAA flight service stations declined by 2.2 percent in 2004. Flight services are forecast to decline 1.7 percent in 2005, and then increase at an annual rate of 0.9 percent over the remainder of the forecast period. The number of flight plans originated is expected to decline over the first 3 years of the forecast period (down 1.9 percent), then increase by 0.6 percent annually over the remainder of the forecast period to 5.6 million in 2016. The number of pilot briefs and aircraft contacted both decline in 2005 (down 2.1 and 2.3 percent, respectively), then grown at an annual rate of 1.2 percent a year increase over the balance of the forecast period.

The number of Direct User Access Terminal System (DUATS) services (up 13.0 percent in 2004) is projected to grow at an average annual rate of 3.1 percent over the forecast period, from 19.8 million in 2004 to 28.4 million in 2016. Combined FSS and DUATS services are expected to total 57.7 million in 2016, an annual increase of 1.8 percent.

## RISKS TO THE FORECASTS

The FAA is once again “cautiously optimistic” that its current outlook for aviation demand and activity can be achieved. As has been the case for the past several years, terrorism remains the greatest risk to achieving the forecasts contained herein. Tighter security measures have restored the public’s confidence in the integrity of U.S. and world aviation security systems. However, because of aviation’s high visibility and global reach, it is likely to continue to be a target for international terrorism. Any terrorist incident aimed at aviation would have an immediate and

significant impact on the demand for aviation services

Terrorist concerns notwithstanding, this year’s forecast is driven, at least in the short-term, by the weakened financial health of the commercial aviation industry, which, in turn, is inextricably tied to what appears to be a permanent shift to considerably higher jet fuel prices.

Economists and economic forecasting services no longer predict, as many did last year, that oil prices will decline to the \$20-\$25/barrel range. Oil prices peaked at \$55/barrel in October 2004 and then fell to \$41/barrel in December. However, prices have risen to \$48/barrel in late January, partially in response to OPEC’s decision in December to reduce oil production by 4.0 percent so as to prop up oil prices. Most economic projections now assume that oil prices will remain in the \$35-\$45/barrel range over the next several years, with \$35/barrel being touted as the new floor for future oil prices.

Higher fuel costs cost U.S. commercial air carriers \$3.4 billion in fiscal year 2004, essentially wiping out the tremendous inroads made by the legacy carriers in reducing their operating costs. If oil prices had stayed at \$35/barrel (as forecast) in 2004, most carriers, including several legacy carriers, would have been profitable. This year’s forecast assumes \$46/barrel oil in 2005, falling to \$41/barrel in 2006 and \$38/barrel in 2007. With oil prices in the \$40-\$45 range, it is unlikely that the industry will return to profitability in either 2005 or 2006. If prices rise to \$50/barrel or higher, the likelihood of the liquidation of one or more carriers increases substantially.

The legacy carriers, which currently account for 65 percent of the industry’s domestic capacity and carry 55 percent of the industry’s domestic passengers, are most at risk from higher fuel prices. While no carrier is immune to higher jet fuel prices, some of the more profitable carriers are able to hedge a large percentage of their fuel costs. In addition, the legacy carriers are



TABLE I-10

# FAA AVIATION FORECASTS SELECTED AVIATION DEMAND MEASURES

CALENDAR YEAR 2005-2016

SELECTED FORECASTS	HISTORICAL			FORECAST			PERCENT AVERAGE ANNUAL GROWTH				
	2000	2003	2004	2005	2006	2016	00-04	03-04	04-05	05-06	04-16
<b>U.S. Economy</b>											
GDP (Bil 2000\$)	9,817.0	10,381.3	10,842.2	11,232.7	11,626.3	15,762.5	2.5	4.4	3.6	3.5	3.2
Oil & Gas Deflator (2000 = 100)	100.0	105.2	127.9	137.6	125.6	140.1	6.4	21.7	7.5	(8.7)	0.8
<b>Total U.S. Commercial Enplanements (Mil)</b>											
Domestic	644.1	593.1	637.7	652.6	686.0	942.5	(0.3)	7.5	2.3	5.1	3.3
Mainline Air Carriers	563.1	483.7	507.5	505.2	523.9	699.4	(2.6)	4.9	(0.5)	3.7	2.7
Regionals/Commuters	81.0	109.4	130.2	147.4	162.2	243.1	12.6	18.9	13.3	10.0	5.3
International	57.2	54.6	62.7	69.9	74.2	114.3	2.3	14.9	11.4	7.9	5.1
Mainline Air Carriers	54.0	51.0	58.5	64.6	68.6	105.6	2.0	14.8	10.3	6.3	5.0
Regionals/Commuters	3.2	3.6	4.2	5.3	5.6	8.7	6.7	16.7	27.1	4.4	6.3
System	701.4	647.7	700.4	722.5	760.2	1,056.8	(0.0)	8.1	3.2	5.2	3.5
<b>Total U.S. Commercial RPMs (Bil)</b>											
Domestic	517.4	500.3	550.6	564.7	597.4	867.1	1.6	10.1	2.6	5.8	3.9
Mainline Air Carriers	493.8	458.1	496.0	499.2	523.7	744.7	0.1	8.3	0.6	4.9	3.4
Regionals/Commuters	23.7	42.2	54.6	65.5	73.7	122.4	23.2	29.4	20.0	12.5	7.0
International	185.5	156.9	181.6	202.2	218.2	343.4	(0.5)	15.7	11.4	7.9	5.5
Mainline Air Carriers	184.6	155.7	179.9	200.0	215.8	339.5	(0.6)	15.5	11.2	7.9	5.4
Regionals/Commuters	0.9	1.2	1.6	2.2	2.3	4.0	16.7	37.2	36.9	5.4	7.7
System	702.9	657.2	732.2	766.9	815.5	1,210.5	1.0	11.4	4.7	6.3	4.3
<b>Air Cargo RTMs (Bil)</b>											
Domestic	14.7	15.1	15.7	16.3	16.9	23.3	1.6	3.4	4.1	3.4	3.4
International	15.4	18.2	20.0	21.3	22.6	40.8	6.7	9.5	6.6	6.3	6.1
System	30.1	33.4	35.6	37.6	39.5	64.1	4.3	6.8	5.5	5.0	5.0
<b>IFR Aircraft Handled (Mil)</b>											
Commercial	33.2	32.1	34.3	35.1	36.3	46.4	0.8	6.9	2.3	3.3	2.6
Non-Commercial	12.8	11.9	12.4	12.6	12.7	14.3	(0.7)	4.2	0.9	1.1	1.2
Total Aircraft Handled	46.1	44.0	46.7	47.7	49.0	60.7	0.4	6.2	2.0	2.7	2.2

Source: CY 2000-2004, Economic data, OMB; Air Carrier/Regional data, DOT; FAA Workload, FAA.

CY 2005-2016, FAA Forecasts

saddled with large amounts of long-term debt and pension obligations that many of the low-cost airlines do not share. In a high oil price scenario, the potential exists for major supply disruptions/dislocations and/or increased passenger inconveniences, either of which could significantly reduce capacity and passenger demand and lessen competition in many markets. In a \$50/barrel plus scenario, supply disruptions would most likely occur through liquidation and/or further contraction of mainline carrier route structures. Under this scenario, several large U.S. airports could lose their major service provider. In a \$40-\$45/barrel scenario, supply disruptions could occur through industry consolidation and/or contraction of legacy carrier route networks. However, it is unlikely that any airport would lose its major airline tenant.

Low-cost carriers are forecast to continue to increase their share of domestic traffic over the forecast period. However, with the exception of Southwest and JetBlue, the 2004 financial performance of these carriers was, at best, mixed. Although most of the current low-cost carriers appear to have greater financial stability and access to funding than previous start-ups, continued high fuel prices, a prolonged slump in travel demand, and/or a prolonged fare war could cause these carriers to scale back planned growth and/or cease operations. Any loss of competition could lead to increased fares and a loss of passenger demand.

Additionally, the forecast assumes continued rapid traffic and capacity growth among regionals/commuters, including the addition of large numbers of regional jets into their fleets. However, these carriers' future is closely tied to those of the larger legacy carriers. Should one or more of these large carriers cease to exist (two are currently operating under Chapter 11 bankruptcy protection), several regional carriers could find themselves either saddled with excess capacity or lack of sufficient capacity to accommodate future growth, the nature of the risk depending upon whether the regional carrier

or the legacy carrier owns or leases the aircraft. Either scenario could result in a loss of capacity and passenger demand at small and medium sized airports.

The industry's recent introduction of fare simplification (capping the one-way walk-up fare at under \$500 and elimination of the Saturday night stay-over) has perhaps lowered the probability of the industry returning to profitability in 2005. The intent of the new fare structure is to induce business passengers to book away from low-cost airlines. Unfortunately, the fares would appear to have, at least in the short-term, a negative revenue impact on all carriers. The legacy carriers would have revenue dilution from business travelers who would have booked at previous higher fares. Regional/commuter carrier revenue is diluted through lower prorated fares on connecting flights. The impact to low-cost carrier revenues depends on the magnitude of any share loss to legacy carriers. If large, the likely low-cost carrier competitive response would be further fare reductions to regain lost share, further reducing revenues for all carriers. In the short-term the industry's financial viability could be seriously eroded, significantly increasing the probability of the liquidation of one or more carriers.

The economic projections used to develop this year's aviation forecasts assume strong economic growth in 2005 and 2006. Global Insight's optimistic scenario--a stronger U.S. dollar, lower oil prices, and a continuation of the information-driven technology boom--projects a 20 percent probability that U.S. economic growth could exceed current projected growth. Higher economic growth would lead to increased demand for aviation services and speed the industry's return to profitability.

However, Global Insight pessimistic scenario--a rapidly declining dollar, rising oil prices, higher inflation, and rising unemployment--projects an equal 20 percent probability that the U.S. economy will be less than predicted.

Slower economic growth would not only slow the recovery in the demand for aviation services but would also hamper and slow the industry's return to profitability.

The global economy recovered from 5 years of weak and uneven growth in 2004, posting fairly strong gains throughout the world. Although the current forecast calls for a return to higher historical growth rates throughout the forecast period, there are numerous downside risks inherent in these forecasts. The fate of the global economy will continue to depend on the sustainability and strength of U.S. economic growth, with most world regions counting on strong export growth to the United States as a major contributor to their future economic growth. If, as predicted, the U.S. dollar continues to fall, strong U.S. economic growth may not translate into strong U.S. import growth. If this occurs, global economic growth could remain sluggish for some time into the future.

In addition, there are potential geopolitical risks that could slow global economic growth, i.e., the uncertain political situations in several major oil exporting countries. Doubts also remain over the strength of domestic demand in both Japan and the Eurozone as these countries continue to be constrained by structural economic problems, political gridlock, institutional constraints, and the authorities' reluctance to take decisive action. The current forecasts assume strong passenger growth for travel between the United States and other world regions. Any slowing of global economic activity could seriously inhibit the growth in world passenger demand.

Historically, international markets have been subject to a series of bilateral agreements that have, for the most part, severely restricted competition. However, if current negotiations between the U.S. and the European Union are successful, additional U.S. carriers could gain access to new markets and introduce new competition in the North Atlantic market.

Greater competition could lead to lower fares and higher growth in these markets.

The demand for general aviation products and services, including business jets, appears to be recovering. How quickly the industry recovers depends, in large part, on the strength of the market for business jets and microjets. How quickly this flying segment responds to the predicted economic rebound will go a long way in determining whether general aviation achieves the predicted increases in the demand for its products and services.

The current forecast assumes the introduction of low priced micro jets starting in 2006, with the market growing to 4,500 by 2016. This is a relatively conservative assumption compared to some industry estimates. If the higher industry estimates are correct, the general aviation active jet fleet and hours flown could be considerably higher than forecast.

The mix of aircraft operating at most large hubs is also expected to become increasingly more complex over the forecast period. The expected large increases in the numbers of smaller regional jets and new microjets will certainly increase the complexities of the national airspace system and make the FAA's job considerably more challenging.

The current FAA workload forecasts assumes that commercial activity (air carrier and regionals/commuters) will exceed pre-September levels in 2005. Delays occurred at a number of U.S. airports in 2004 and could become a critical limit to growth over the forecast period. Based on the 2004 FAA Terminal Area Forecasts, 17 of the 35 Operational Evolution Plan (OEP) airports currently exceed pre-September 11<sup>th</sup> activity levels. In addition, another seven airports are

expected to reach or exceed pre-September 11<sup>th</sup> levels over the next 2 years.<sup>17</sup>

The U.S. and world economic scenarios presented in this document assume strong growth in both 2005 and 2006 and moderate sustained growth throughout the remainder of

the forecast period. If these economic forecasts are realized, the demand for commercial general aviation products and services should fully recover to pre-September 11<sup>th</sup> levels during the 2005/2006 time frame and continue to expand throughout the remainder of the forecast period.

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<sup>17</sup> Baltimore/Washington, New York Newark, Washington Dulles, New York Kennedy, Orlando, and Phoenix in 2005; Honolulu in 2006.